

SUPPLEMENTAL PRELIMINARY ENDANGERMENT ASSESSMENT REPORT SAMPLING ACTIVITIES AND RESULTS

Atlas Radiator, Inc. 10220 S. Norwalk Boulevard Santa Fe Springs, CA

SUPPLEMENTAL PRELIMINARY ENDANGERMENT ASSESSMENT REPORT SAMPLING ACTIVITIES AND RESULTS

Atlas Radiator, Inc. 10220 S. Norwalk Boulevard Santa Fe Springs, CA

Prepared For:

Donald G. Miller c/o Atlas Radiator, Inc. 10110 S. Norwalk Blvd. Santa Fe Springs, CA 90670

Submitted To:

State of California
California Environmental Protection Agency
Department of Toxic Substances Control
Facility Management Branch
1011 Grandview Avenue
Glendale, CA 91201

Prepared By:

Alaska Petroleum Environmental Engineering, Inc.

295 Redondo Avenue, Suite 202

Post Office Box 14766

Long Beach, CA 90803

December 1995



January 5, 1996

State of California, California Environmental Protection Agency Department of Toxic Substances Control Facility Management Branch 1011 Grandview Avenue Glendale, CA 91201

Attn:

Jess Villamayor

Re:

Atlas Radiator

10220 S. Norwalk Boulevard

Santa Fe Springs, CA

Dear Mr. Villamayor:

Pursuant to the workplan submitted on October 2, 1995, please find attached the Supplemental Preliminary Endangerment Assessment report for the work conducted at the referent site. The purpose for conducting this work is to ensure that the previously established "Preliminary Remedial Goal" of less than 1,000 parts per million of total lead has been achieved.

The site consists of two parcels. The work conducted on the first parcel received Department of Toxic Substances Control (DTSC) remediation approval pursuant to the "Preliminary Endangerment Assessment" (PEA) submitted in April 1995. The eastern two-thirds of the second parcel received closure from the California Regional Water Quality Control Board under Waste Discharge Permit Nº 90-60-36(93) in 1994.

Decontamination, demolition, confirmation sampling, and off-site disposal activities were conducted within the remaining 19,600 square feet of the second parcel between September 25th and December 28, 1995. Should you have any questions or comments concerning this supplemental PEA, please contact me at extension 205. On behalf of Atlas Radiator, Alaska Petroleum Environmental Engineering, Inc. appreciates the assistance which has been received from you and the DTSC on this project.

Alaska Office 907•479-9555 P.O. Box 81904 Fairbanks, Alaska 99708

California Office 310 • 433 - 5144 FAX 310 • 433 - 6998 P.O. Box 14766 Long Beach, California 90803

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A. L. Stillman Principal Engineer

ALS/bdb

enc c:

Don Miller/Eddie Cerda - Atlas Radiator, Inc.
Fred Cartozian - First State Bank of Southern California
Andrew C. Lazzaretto - City of Santa Fe Springs

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Atlas Radiator, Inc., Santa Fe Springs, CA

Project Nº 501833 December 1995

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Atlas Radiator, Inc., Santa Fe Springs, CA

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Atlas Radiator, Inc., Santa Fe Springs, CA Project Nº 501833 December 1995

1.0 INTRODUCTION

The subject property is owned by Donald Grandcourt and Birdie Ann Miller (hereafter referred to as "Miller"), and is located at 10220 S. Norwalk Boulevard, Santa Fe Springs, Los Angeles County, California (Figure 1, Site Location). Until recently, the on-site facility operations included a radiator repair facility, Atlas Radiator, Inc. (hereafter referred to as "Atlas"). Atlas has been operating on-site since 1973, although Miller has owned the property since 1945.

1.1 Background

The property was legally subdivided divided into two parcels in April 1995 (Figure 2, Site Diagram). Prior to this Atlas had operated a radiator repair facility on Parcel 2 and an air conditioning supply/repair business on Parcel 1. When the building housing the air conditioning business was demolished in April 1995 its operations was temporarily relocated to Parcel 2.

Parcel 1 was the subject of the Preliminary Endangerment Assessment (PEA) that was submitted to the State of California, California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) - Region 4 (Long Beach) in April 1995. The purpose for providing the PEA report was to establish remedial goals for the property. The intent was to demonstrate that the guidelines established and utilized by the DTSC for the assessment of health risks associated with inorganic lead could be followed, and were acceptable for this parcel. The DTSC -Sacramento has determined that the health-based preliminary remedial goal (PRG) or clean-up criteria of less than 1,000 parts per million (ppm) of total lead is acceptable for commercial/industrial usage properties, and a PRG of less than approximately 200 ppm is acceptable for residential properties. The findings presented in the April 1995 PEA established the PRG for Parcel 1 as 1,000 ppm of lead. Parcel 1 was remediated to a PRG of less than 1,000 ppm of total lead and was subsequently redeveloped. A 15,000 square foot building has been constructed on Parcel 1; the remaining portion of the parcel has been covered with concrete for either parking or storage.

Soil samples were collected from undisturbed portions of Parcel 1 to determine the background lead concentrations. These analytical results and previous sampling locations are presented in Appendix A, April 1995 PEA Excerpts, Background Sample Analysis Table and Site Grading Sampling Grid; the analytical report for these samples are contained in the April 1995 PEA report.

The eastern two-thirds of Parcel 2 was previously remediated by UNOCAL who operated and abandoned two oil wells within this area. The remediation was successfully completed pursuant to the California Regional Water Quality Control Board - Los Angles Region, Waste Discharge Permit Nº 90-60-36(93).

Atlas Radiator, Inc., Santa Fe Springs, CA Project Nº 501833 December 1995

1.2 Purpose and Objectives

The intent is to include, as an addendum to the PEA, the results of the decontamination confirmation sampling and the remedial activities conducted at the western-third of Parcel 2 (hereafter referred to as the "Site"). The conclusions reached in this supplemental PEA are based upon the DTSC's "Lead Risk Assessment Spreadsheet" analysis.

The objective is to sell Parcel 2 having achieved the commercial/industrial PRG of less than 1,000 ppm of total lead; the sale of this parcel is currently in escrow. The adjacent property owner is purchasing the parcel for business expansion. Escrow will close when this assessment is completed and closure is granted by the DTSC. This parcel will be redeveloped similarly to Parcel 1. After construction both parcels will be capped with two buildings and associated parking lots. Any movement of soil within Parcel 2 for the purpose of new construction will be in accordance with South Coast Air Quality Management District's Rule 403 - "Fugitive Dust".

2.0 PREVIOUS ASSESSMENTS

In 1988, a Phase I Preliminary Site Assessment (PSA) was conducted by Applied Geosciences, Inc. on both parcels. As part of this assessment, a methane gas survey was also conducted. It included the installation of seven near-surface vapor probes to sample soil gas from depths of approximately three feet below ground surface. The gases analyzed in the survey included: methane, two isotopes of ethane, two isotopes of propane, iso-butane, and n-butane. No anomalous results were indicated in the report for the probes installed on the either parcel; the map depicting the methane probe locations was included in the PEA report.

Based upon the results in the aforementioned PSA, additional limited investigation was conducted by Woodward-Clyde Consultants on Parcel 2 and a portion of the eastern adjacent UNOCAL property. In 1991, Alaska Petroleum Environmental Engineering, Inc. (Alaska Petroleum) was retained by the City of Santa Fe Springs, UNOCAL and Miller to conduct a limited site characterization study to include Parcel 2, the subject of this supplemental PEA.

Three trenches and five hand borings were advanced, and one grab sludge sample was collected during the Alaska Petroleum investigation. Trenches N^{o} 's 1 - 3 were advanced in area of the radiator repair shop's exterior repair/storage/staging area; the other sampling locations are depicted on the diagrams in Appendix B, Previous Site Work - Maps & Analytical Results.

Twenty-five soil samples were analyzed by the following United States Environmental Protection Agency test methods:

Atlas Radiator, Inc., Santa Fe Springs, CA

Project № 501833 December 1995

- 418.1 (total recoverable petroleum hydrocarbons)
- 7000 series (California Code of Regulations, Title 22, Article 11, § 66261.24, Table II metals)
- 8010 (chlorinated hydrocarbons)
- 8015 (total fuel petroleum hydrocarbons)
- 8020 (benzene, toluene, xylenes, and ethylbenzene)
- 9045 (Ph)

All soil sample results obtained from the aforementioned methods were below regulatory action limits except for heavy metals. Total lead concentrations ranged from 1,280 to 23,300 ppm. The areas of concern for elevated heavy metal concentrations were at:

- (1) the soils at the buildings exterior at a depth of 12 inches,
- (2) the sludges from the building's interior radiator repair operational area
- (3) the shallow soil samples from beneath the building's interior floor, and
- (4) from near the former acid storage area at the southeast corner of the building.

3.0 DECONTAMINATION ACTIVITIES AND SAMPLING RESULTS

The methodology used to complete this study is outlined in the "Sampling Plan" submitted to the DTSC on October 16, 1995. Included therewith was the "Site Health and Safety Plan" for conducting the Site work. These documents are provided as *Appendix C*, *Methodology and Procedures*.

3.1 Summary of Activities

3.1.1 Structure Decontamination and Disposal

September 25 - October 19, 1995

All the radiator repair derived sludges from the floor area were removed and placed into a covered, hazardous waste roll-off bin. The floor was hydroblasted (i.e., high-pressure/temperature washer); the residual sludge and rinseate was captured in an existing, closed-loop clarifier system.

Two other hazardous waste roll-off bins were filled with sludges from the current Atlas operations. The liquids which separated from the sludges in the three hazardous waste roll-off bins were removed with a vacuum truck.

Atlas Radiator, Inc., Santa Fe Springs, CA Project Nº 501833 December 1995

The solids were transported and disposed of at Chemical Waste Management in Kettlemen City, CA, and the liquids were treated by Chem Tech Services, Los Angeles, CA; a copy of the manifests are contained in *Appendix D*, *Hazardous Waste Manifests: Sludge and Rinseate*. The building was demolished; the disposal/recycling of the corrugated metal building was arranged for by Atlas.

3.1.2 Soil Remediation and Disposal

After the building was removed, a sampling grid block was set-up based upon the methodology detailed in Appendix C. The sample locations are depicted on Figure 3, Sample Locations. The analytical results are summarized in the tables contained in Appendix E, Soil Sampling Analytical Results and Laboratory Reports.

October 18 - 19, 1995

A total of 16 grid block locations, and four soil stockpiles generated from the removal of apparent stained areas, were sampled (Appendix E, Table I).

October 20 - 26, 1995

The grid blocks in excess of 1,000 ppm of total lead were excavated, the material was stockpiled and both the grid blocks and stockpiles re-sampled. Further, some additional grid block sampling was conducted from areas that were not previously sampled (Appendix E, Table II).

October 27 - November 1, 1995

In their attempt to locate the wellhead for "Bell 14" (an oil well) which was to be reabandoned, the oil field operator (UNOCAL) excavated a portion of grid blocks B3 and B4. In addition to these grid blocks, grid block E4 was re-excavated and sampled. The material which UNOCAL used to backfill the former clarifier area was also re-sampled (Appendix E, Table III).

November 1 - 15, 1995

Based upon the previous sampling results, further grid block excavation and stockpile resampling was conducted. The stockpiles were re-sampled in order to determine proper management options.

Some of the liquids from the hazardous waste bins leaked onto the soils located in grid block C2. These soils were excavated and the underlying soils sampled; the stockpile generated was also sampled (Appendix E, Table IV).

Atlas Radiator, Inc., Santa Fe Springs, CA Project № 501833 December 1995

December 28, 1995

All stockpiled soil with total lead concentrations in excess of 1,000 ppm was transported off-site to US Ecology in Beatty, Nevada for disposal. Copies of the transportation manifests are contained in *Appendix F*, *Hazardous Waste Manifests: Soil*.

4.0 TECHNICAL EVALUATION

The goal of the PEA screening analysis is to "insure that no potential health hazard is overlooked". There is no wildlife or plant life present on the property. The property does not contain any water bodies nor is there any in close proximity; nearest groundwater is approximately 80 feet below ground surface, and appears to may have been impacted by oil field activities in the surrounding area [PEA report]. The reasonable maximum exposure to the onsite lead will be limited to the construction of the building pad and subsequent capping of the property.

Utilizing the appropriate input values as listed in the Lead Screening Parameters table present in the PEA report, the exposure risk was calculated. The concentration of total lead used in the calculation is the average lead result of 167 ppm; discrete concentrations range from 3.2 to 880 ppm. The final closure analytical results are depicted on Figure 4, Location of, and Final Analytical Results. These results are obtained from the data is presented in Appendix E, and is used in the analysis provided in Appendix G, Lead Risk Assessment Spreadsheet. The levels of lead detected on-Site are within the allowable limits as determined through this assessment. This analysis supports the industrial/commercial limit of 1,000 ppm of total lead.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary and Conclusions

- The past practices of the handling of hazardous waste/substances at the property resulted in the release of the lead into the surficial soils.
- The release does not pose an immediate potential hazard to the public health or the environment. The average of the analytical results is 167 ppm of lead; discrete concentrations range from 3.2 to 880 ppm. The State developed health-based preliminary remedial goal for commercial/industrial site usage is approximately 1,000 ppm. There appears to be no immediate threat to the public health and environment.

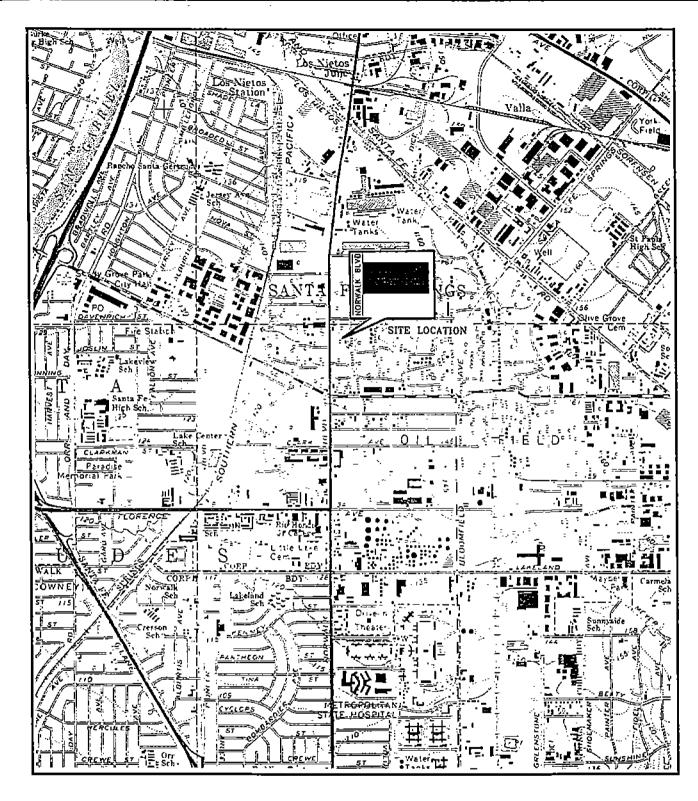
Atlas Radiator, Inc., Santa Fe Springs, CA Project № 501833 December 1995

Four soil stockpiles containing lead in excess of 1,000 ppm of total lead were transported
off-site for disposal at a permitted Class I facility. The signed manifests from the facility
will be submitted as an addendum to this supplemental PEA report.

5.2 Recommendations for Further Action

• Based upon the results of the sampling conducted during the demolition and limited remedial activities and the PRG as determined from the Lead Risk Assessment Spreadsheet, the concentration of on-Site lead contamination is acceptable for the current land use. As mentioned above, the concentration of lead is less than that allowed by the DTSC's health-based PRGs for a commercial/industrial usage property of approximately 1,000 ppm. Therefore no further action of any type is required beyond a deed restriction similar to the one provided for Parcel 1.

Figures



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UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY, WHITTIER QUADRANGLE,
7.5 MINUTE SERIES (TOPOGRAPH), EL MONTE, CALIFORNIA 1955 (PHOTO REVISED 1981)

Approximate Scale 1" = 24,000

ALASTA PETROLEIM
ENTRONAENTAL
ENCINEERING
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P.O. Box14765 Long Beach, CA 90803 (310)433-5144

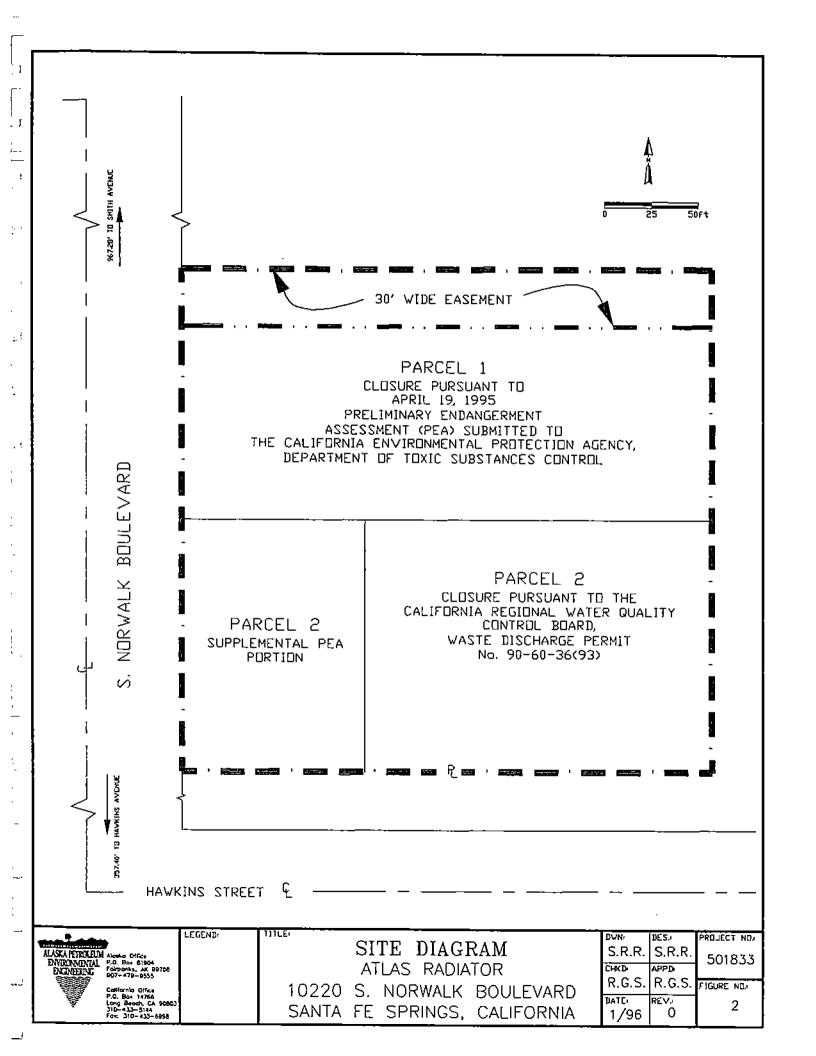
P.O. Box 81904 Foirbanks, AK, 99708 (907)479-9555 SITE LOCATION

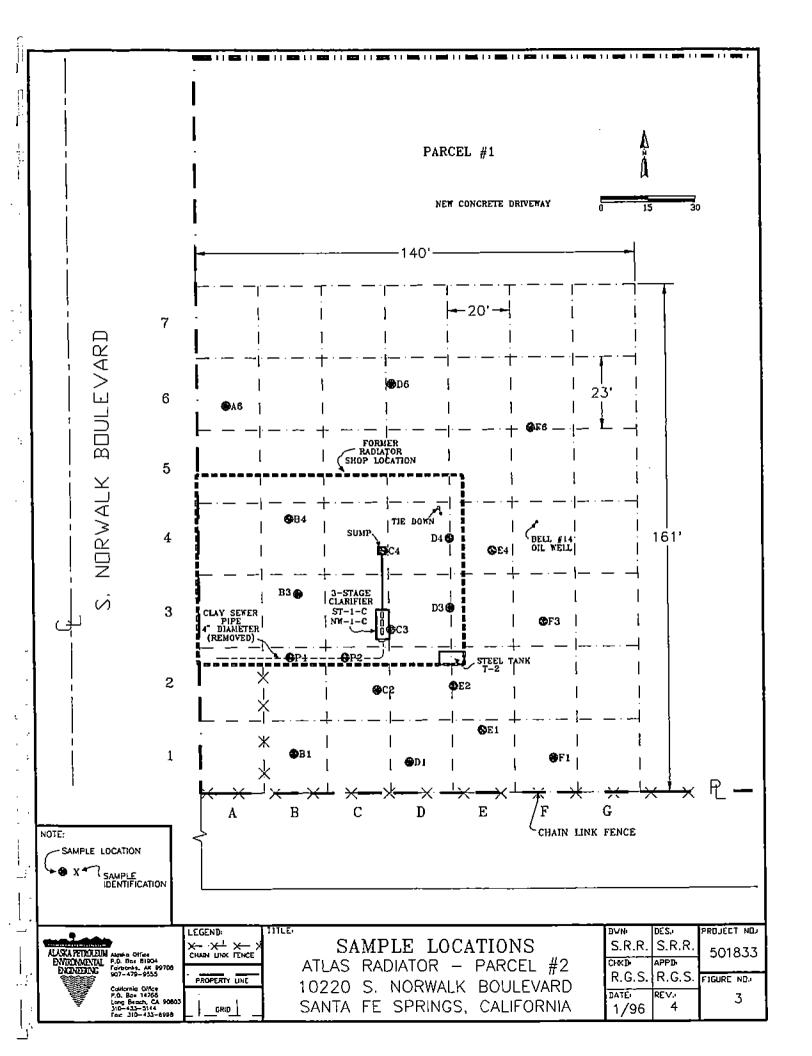
ATLAS RADIATOR COMPANY

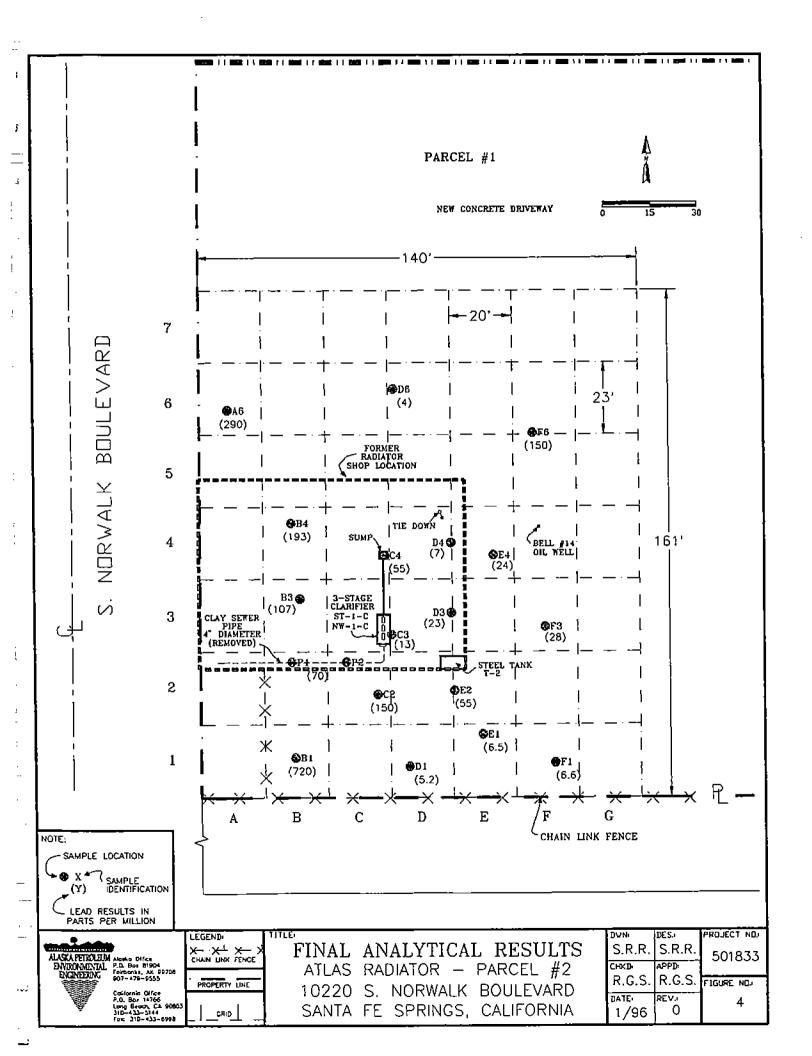
10220 S. NORWALK BOULEVARD

SANTA FE SPRINGS, CALIFORNIA

DES.:	PROJECT NO.:
S.R.R.	501833
APPD:	
R.G.S.	FIGURE NO.:
DATE: 12/95	1







Appendix A

April 1995 PEA Excerpts, Background Sample Analysis
Table and Site Grading Sampling Grid

TABLE I Background Sample Analysis

Sample Identification	Depth (ft)	Analytical Results ^[1] (ppm) CCR Metals ^[2]
J12-0.5	0.5	Pb @ 81
J12-1.5	1.5	BTL
J12-2.5	2.5	Pb @ 237
M6-1.5	1.5	Pb
M6-2.5	2.5	BTL
M6-3.5	3.5	BTL
J26-0.5	0.5	Pb @ 98
J26-1.5	1.5	BTL
J26-2.5	2.5	BTL
J26-3.5	3.5	BTL

BTL

= below threshold limits

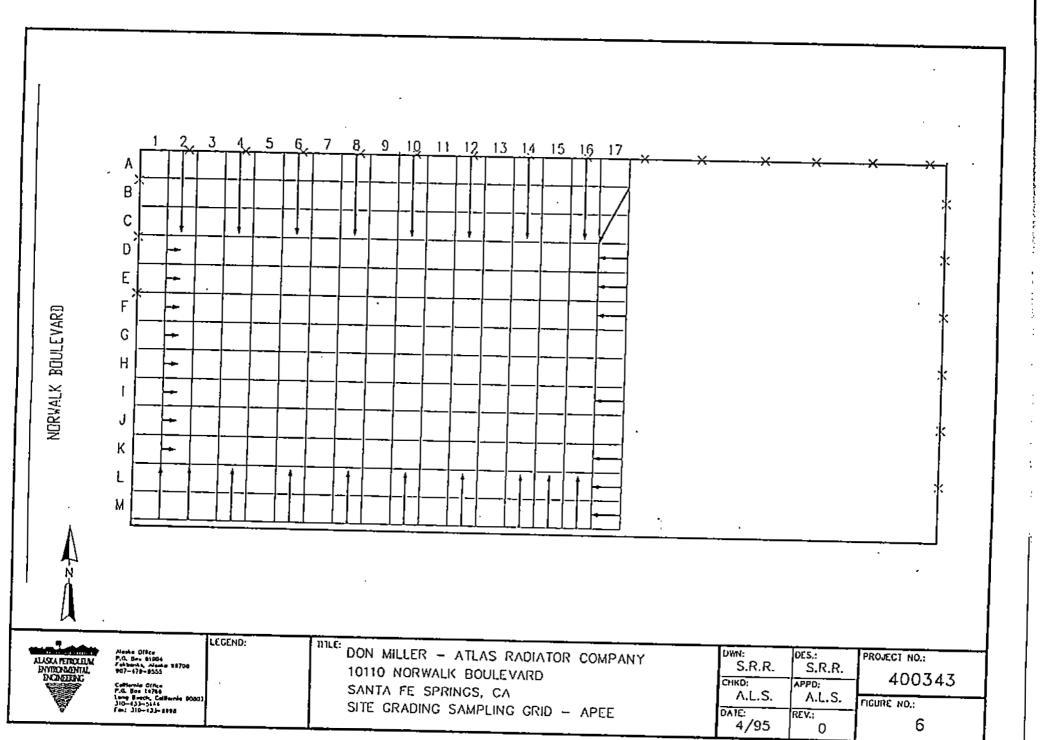
ft

= feet

ppm = parts per million

[1] Cu, Pb & Zn = copper, lead and zinc only

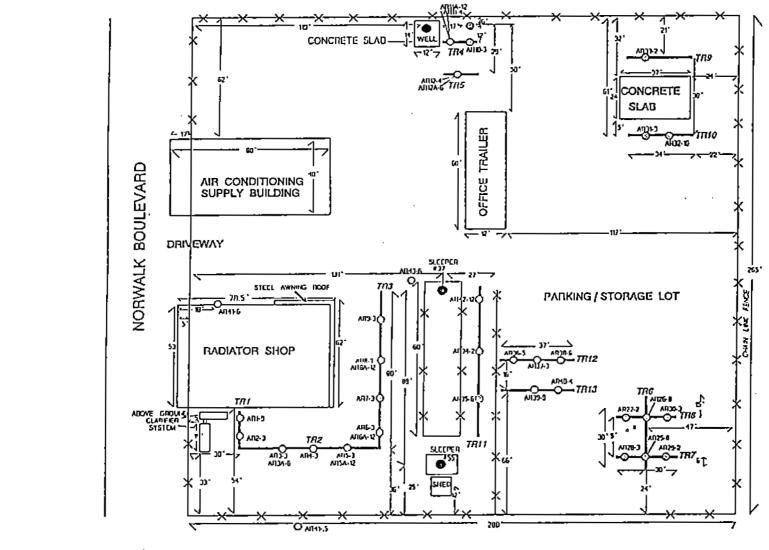
California Code of Regulations (CCR), Title 22, Article 11, § 66261.24, Table II - List of Inorganic Persistent and Bioaccumulative Toxic Substances and Their Soluble Threshold Limit Concentration: (STLC) and Total Threshold Limit Concentration (TTLC) Values. Only those results which exceed 10x their respective STLC action limit are reported, otherwise denoted as BTL.



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Appendix B

Previous Site Work - Maps and Analytical Results



SAMPLE IDENTIFICATION EXAMPLE:

AR1-9 - ATLAS RADIATOR, SAMPLE

1, TAKEN AT NINE (9) FEET
BELOW GROUND SURFACE

LEGEND:

- WELL HEAD LOCATION
 - POWER POLE LOCATION
- SAMPLE LOCATION
 - TRENCHING LOCATION

Approximate Scale:





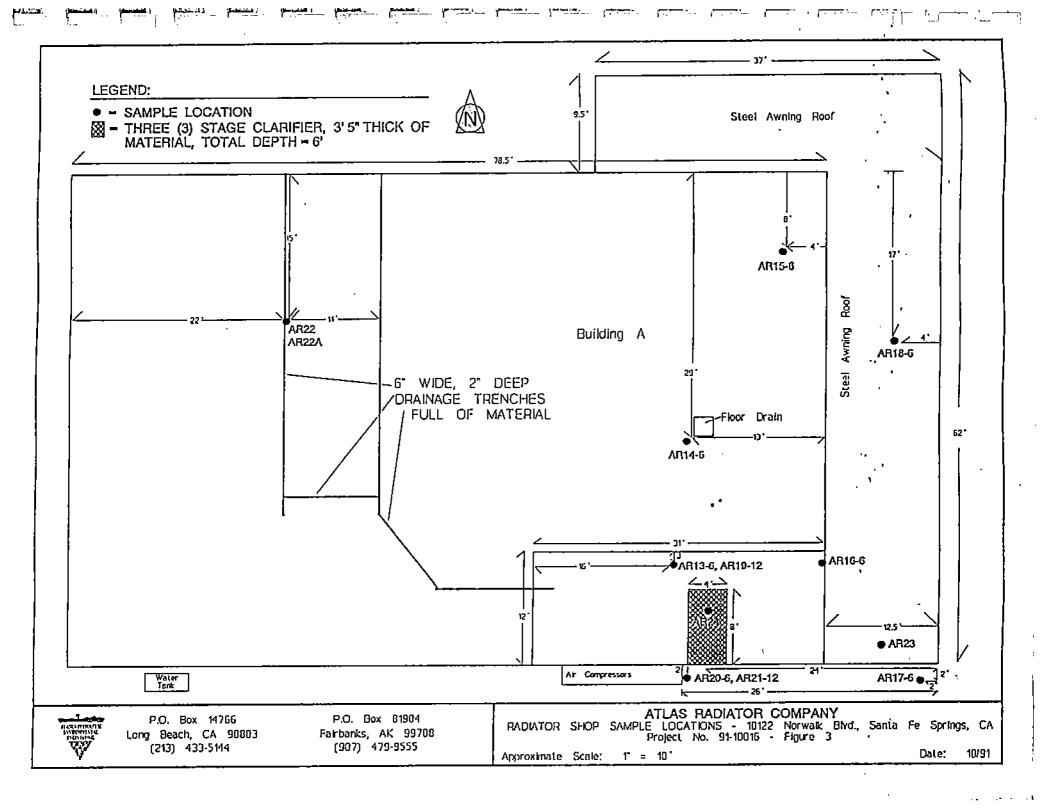
P.O. Box 14766 Long Beach, CA 90003 (213) 433-5144 P.O. Box 01904 Fairbanks, AK 99708 (907) 479-9555 ATLAS RADIATOR COMPANY

1" = 50"

SITE DIAGRAM - 10122 Norwalk Boulevard, Santa Fe Springs, California

Project No. 91-10016 - Figure 2

Date: 10/91



<u>.</u>

5.2 Radiator Repair Shop

TABLE II Analytical Results - Radiator Repair Shop

Sample ID	Sample Depth (feet)	EPA 8015 (mg/kg)	EPA 8010 (mg/kg)	EPA 8020 (mg/kg)	EPA 418.1 (mg/kg)	EPA 9045 (pH)	CCR Metais (mg/kg)
Trench 1 AR-1 AR-2	9 3 Archive	ИD	ND	ND	ND	9.3	BTL
Trench 2 AR-3 AR-3A AR-4	3 0.5 3 Archive 3 Archive	ND ND	ND Freon 113 =0.160	ND T=0.054	190 1,900	8.6 8.9	Pb=184 BTL
Trench 4 AR-10 AR-11 AR-11A	4 4 Archive	ND ND	ND ND	ND ND	ND 240	7.5 7.9	BTL BTL
Trench 5 AR-12 AR-12A	4 Archive 0.5	ND	ND	T=0.089	140	8.7	Pb=66.9
Trench 9 AR-33	2	ND	ND	ND	470	9.0	Pb=57.4
Trench 10 AR-31 AR-32	3 10	ND ND	ND ND	ND ND	11 ND	9.2 9.5	BTL BTL
AR-13	0.5	ND	ND	ND	68	6.7	Cu=3,400 Pb=15,600 Zn=10,700
AR-14	0.5	ND	ND	ND	83	7.3	Cu=250 Pb=12,800 Zn=6,780
AR-15	0.5	ИD	ND	ND	מא	8.6	Pb=84.1

TABLE II, cont Analytical Results - Radiator Repair Shop

Analytical Results - Radiator Repair Shop							
Sample ID	Sample Depth (feet)	EPA 8015 (mg/kg)	EPA 8010 (mg/kg)	EPA 8020 (mg/kg)	EPA 418.1 (mg/kg)	EPA 9045 (pH)	CCR Metals (mg/kg)
AR-16	0.5	12	ND	T=0.17 X=4.6 E=0.61	19	9.4	Pb=488
AR-17	0.5	36	ND	X=0.078 E=0.60	1,800	9.5	Cd=23.4 Cu=5,640 Pb=23,300 Zn-19,200
AR-18	0.5	ND	ND	ND	330	9.3	Cu=258 Pb=575
AR-19	1-Archive	·			_		
AR-20	0.5	ND	Freon 113 = 0.120	ND	500	7.6	Cu=598 Pb=4,720 Zn=4,900
AR-21	1-Archive						
AR-22 AR-22A	0-Archive 0.5	ND	ND	ND	200	8.8	BTL
AR-23	Archive					-	
AR-24	0	8	ND	T=0.55	17,000	6.9	Cu=3,960 Pb=9,620 Zn=16,300
AR-41	0.5	ND			1,100		Pb=203

5.3 Multiple Use Area

TABLE III
Analytical Results - Multiple Use Area

	-	. 					
Sample ID	Sample Depth (feet)	EPA 8015 (mg/kg)	EPA 8010 (mg/kg)	EPA 8020 (mg/kg)	EPA 418.1 (mg/kg)	EPA 9045 (pH)	CCR Metals (mg/kg)
Trench 3 AR-5	3-Archive						
AR-5A	1	ND	ND	T=0.097	1,300	9.4	Cu=443 Pb=1,280
AR-6	3	סא	ND	ND	490	8.6	Pb=338
AR-6A AR-7 AR-8	1 3-Archive 3-Archive	ND	ND	ND	950	8.2	Pb=390
AR-8A	1	ND	ND	DN	870	8.6	BTL
AR-9	3	ИD	ND	ND	39	8.1	BTL
AR-43	0.5	ND		<u> </u>	6,200		

VI. INTERPRETATION

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Because not all constituents analyzed for have documented and/or suggested regulatory action limits in soil, several sources were used to assess the concentrations encountered. These sources included:

- Los Angeles County, Department of Public Works (LACDPW)
- City of Santa Fe Spring (City)
- Water Resources Control Board (WRCB) Leaking Underground Fuel Tank (LUFT) Manual Guidelines
- Regional Water Quality Control Board, Los Angeles Region (RWQCB)
- California State Drinking Water Standards (DWS)
- California Department of Health Services (DHS), Applied Action Limits (AAL)
- California Code of Regulations, Title 22
- South Coast Air Quality Management District

All the constituents analyzed for were at non-detectable or below known regulatory action limits except for the following constituents:

Appendix C

Atlas Radiator 10220 S. Norwalk Boulevard Santa Fe Springs, CA

Sampling Workplan

October 1995

Submitted To:

State of California
California Environmental Protection Agency
Department of Toxic Substances Control
Facility Management Branch
1011 N. Grandview Boulevard
Glendale, CA 91202

Prepared By:

Alaska Petroleum Environmental Engineering, Inc.

295 Redondo Avenue, Suite 202

Post Office Box 14766

Long Beach, CA 90803



October 16, 1995

Via U. S. Mail

State of California
California Environmental Protection Agency
Department of Toxic Substances Control
Facility Management Branch
1011 N. Grandview Boulevard
Glendale, CA 91202

Attn:

Mr. Jess Villamayor

Re:

Confirmation Sampling Workplan

Atlas Radiator

10220 S. Norwalk Boulevard

Santa Fe Springs, CA

Dear Mr. Villamayor:

Pursuant to our conversation on October 2, 1995, please find attached the referent workplan. The purpose for conducting this work is to ensure that the previously established "Preliminary Remedial Goal" of 1,000 parts per million of total lead has been achieved for the entire site.

The site consists of two parcels. The first parcel has received Department of Toxic Substances Control (DTSC) remediation approval pursuant to the "Preliminary Endangerment Assessment" submitted in April 1995. The eastern two-thirds of the second parcel received closure from the California Regional Water Quality Control Board, Waste Discharge Permit Nº 90-60-36(93) in 1994.

Confirmation sampling in the remaining 19,600 square feet of the second parcel has been scheduled to commence on October 18, 1995. Should you have any questions or comments concerning this sampling plan, please contact me at extension 205. On behalf of Atlas Radiator, Alaska Petroleum Environmental Engineering, Inc. appreciates the assistance from you and the DTSC on this project.

Cordially,

A. L. Stillman

Principal Engineer

ALS/srr

enc

cc: Don Miller/Eddie Cerda - Atlas Radiator

Fred Cartozian - First State Bank of Southern California

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FAX 310+433-6998 P.O. Box 14766

ong Beach, California 90803.

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Figure 2 Site Diagram
Figure 3 Sample Grid Location

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Appendix A April 1995 - PEA Excerpts Background Sample Analysis Table and Site Grading Sampling Grid - APEE, April 1995

Appendix B Site Health and Safety Plan

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The objective is to sell Parcel 2 having achieved the residential PRG of 200 ppm of total lead; this parcel is currently in escrow. An adjacent business is purchasing the parcel for business expansion. Escrow will close when this assessment is completed and Site closure is granted by the DTSC. This parcel will be likewise paved and a new building constructed. The entire PEA Site will be capped with both parking lots and two buildings. Any movement of soil within Parcel 2 for the purpose of new construction will be in accordance with the South Coast Air Quality Management District's Rule 403 - "Fugitive Dust".

1.3 Project Deliverables

It is understood that another Voluntary Clean-up Program application is not necessary. Further, another complete PEA report need not be submitted since the majority of the information presented in the PEA for Parcel 2 will be the same for Parcel 1. However, the following documentation has been requested and is being submitted as a PEA addendum:

- (1) Sampling Work Plan
- (2) Worker Health and Safety Plan
- (3) Sampling Activities and Results
 - Human Health Screening Evaluation "Lead Spread Sheet"

2.0 Soils Investigation

The following methodology is provided for the collection of surface and subsurface soil samples. The purpose for conducting the work is to obtain soil samples, under proper Chain-of-Custody procedures, for chemical analysis. This activity is being conducted pursuant to the health and safety guidelines presented in Appendix B, Site Health and Safety Plan.

2.1 Sample Locations

The former radiator repair shop was decontaminated and demolished in late-September to mid-October 1995 by Alaska Petroleum Environmental Engineering, Inc. (APEE). As previously mentioned, the eastern two-thirds of Parcel 2 was successfully remediated under Regional Water Board primacy. Therefore, the confirmation sampling will be limited to the western third area only. An approximately 20 foot square soil sampling grid will be established over a 19,600 square foot area (i.e., 140 by 140 feet) (Figure 3, Sample Grid Location). Soil samples will be collected at 15 locations at zero, six, 18, and 30 inches below ground surface.

2.2 Hand Auger Sampling Procedures

A hand auger and slide hammer sampler will be utilized to collect subsurface samples. A clean six inch long by two inch diameter brass tube shall be inserted into the slide hammer sampler and placed into the auger hole. The sampler will be pounded into the soil until the brass tube is completely full of soil. The same borehole will be used to collect samples at the depths specified in Section 2.1.

The procedure will commence from zero to six inches, the next six inches will be hand augered to remove the underlying six inches of soil, and then the sampler advanced from 12 to 18 inches, and so on. The sampler will be immediately withdrawn, the brass tube removed and covered at each end with a Teflon® sheet, then capped with a snug fitting polyethylene plastic cap, and finally sealed with Paraseal™ (i.e., a non-solvent containing, wax-based tape). Pending laboratory analysis, the sample will be labeled, packaged and chilled. The sampler shall be decontaminated between each sampling event (refer to Section 2.4).

The Chain-of-Custody instructions will specify that the analysis be conducted at the bottom of the tube except for the zero to six inch sample which will be analyzed at both the top and bottom of the tube. This procedure will ensure that all soil samples are "undisturbed".

2.3 Chemical Analysis

Soil samples shall be analyzed by the United States Environmental Protection Agency (USEPA) Method 7420 for the California Code of Regulations, Title 22, Total Threshold Limit Concentration for total lead. The method detection limit for is 2.4 ppm.

The Chain-of-Custody instructions shall read: analyze the zero, six and 18 inch deep samples, and archive the 30 inch deep sample. Should the 18 inch sample's analytical result exceed the residential PRG of 200 ppm, the 30 inch sample will be similarly analyzed.

2.4 Decontamination Procedures

All equipment used for sampling will be thoroughly decontaminated prior to sampling and then again between each sampling event to help prevent cross-contamination of the samples as well as the introduction of external contaminants. The equipment (e.g., sampler, auger, etc.) that comes into contact with soil will be decontaminated, if visible dirt or other foreign material is observed, by physically removing it with a wire brush, washing with a trisodium phosphate solution (i.e., soap), and then rinsing twice with on-Site clean tap water.

2.5 Backfill Procedures

3

Each borehole will be backfilled with the augered soils.

2.6 Quality Assurance/Quality Control (QA/QC)

2.6.1 Sample Containers, Preservation and Holding Times

Sample containers, preservation and holding times are as listed below. Clean sample containers will be provided by the laboratory and/or manufacturer.

USEPA Method	<u>Container</u>	<u>Preservation</u>	<u> Holding Time</u>
7420	brass	none	six months

2.6.2 Chain-of-Custody Records

Soil samples collected during the Site investigation are traceable from the time the samples are collected until their derived data is used in this report. The following guidelines apply to sample handling, packaging, and shipping activities:

- Field sampling staff shall read and fully understand the monitoring requirements in order to ensure that the correct analyses are identified and that sufficient sample containers, properly prepared and in sufficient numbers, are available.
- An ice chest containing "blue" ice will be on hand before sampling is started.
- Samples will be collected in appropriate containers.
- Proper sample identification data will be added to each sample tube.
- Samples will remain in the ice chest until they were received by the laboratory.
- A copy of each Chain-of-Custody record will accompany the samples to the laboratory.

Sample identification documents will be carefully prepared so that identification and Chain-of-Custody will be maintained, and sample disposition is controlled. The information on the sample tubes shall correspond to the Chain-of-Custody Record which shows the identification of individual samples and the contents of the shipping container. The original record will accompany the sample shipping container during transport, and a copy will be retained by APEE personnel.

When transferring samples, the individual relinquishing and receiving the samples will sign, date, and note the time on the record. Field notes will be maintained which contained a daily recording of field measurements and other pertinent information. As the laboratory receives the samples, sample custody is then in accordance with the laboratory's standard operating procedures for sample handling.

2.6.3 Laboratory QA/QC

Specific laboratory QA/QC protocols are required of the laboratory. These protocols include, but are not limited to, the following:

- (1) A method blank will be analyzed within each batch of samples. Laboratory Control Samples (LCS) of a reference standard will be prepared and introduced into the analytical scheme at the laboratory to assess method performance. The characterized reference standard will be used to verify acceptable method performance previously established as specified in the USEPA Method. Duplicate LCS will be analyzed with every batch of samples by spiking at specified individual analyte concentrations. The Surrogate Control Standard will be spiked in every sample, standard, method blank, and laboratory control samples to assess the performance of the analytical system.
- (2) The laboratory manager will be responsible for the analytical data reduction. Method and equipment rinseate blank results will be reported separately and not subtracted from the analytical results of the samples. For example, if through the data reduction process the precision or accuracy data quality objectives for LCS are outside of acceptance limits, samples analyzed with that group of quality control data will be submitted for re-analysis.
- (3) The QA accuracy objective for quantitative analysis are expressed in terms of the percent recovery of target analytes in LCS. The QA precision objective for quantitative analysis is expressed as the relative percent difference of target analytes in field duplicates and LCS. The QA data objective for the completeness is 99%.

3

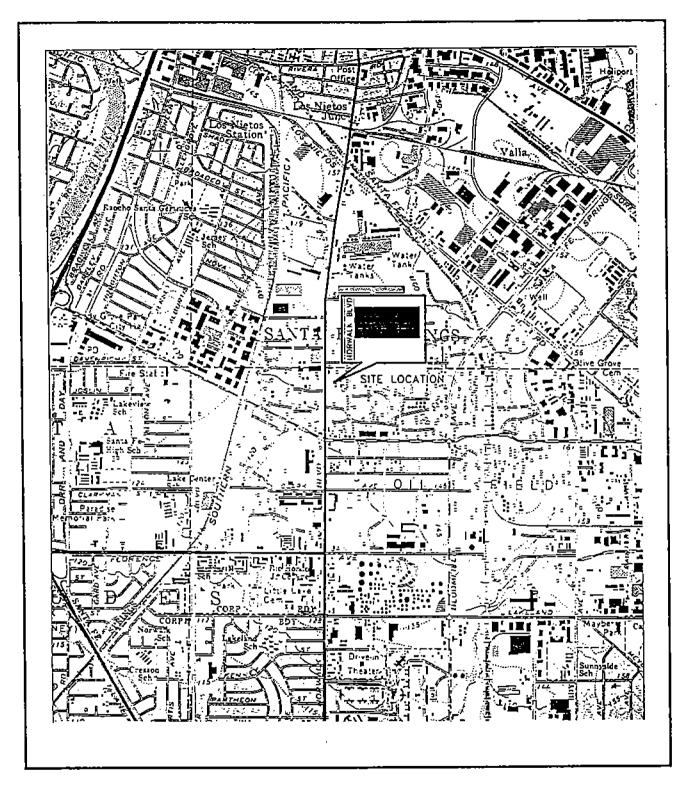
 \mathbb{R}^{3}

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- (4) Data validation will be performed by the laboratory. Data will be checked for internal consistency with their QA/QC program plan for operations and transmittal errors. Sample holding times from collection to extraction and analysis will be determined and compared to the analytical requirements specified above. Data will be quantitatively qualified as estimated if holding times specified have been exceeded.
- (5) Analytical out-of-control situations will be determined by the laboratory manager. If method blank contamination or poor precision and accuracy (i.e., outside the acceptance criteria) is observed or recovery of surrogate standards in samples are outside the established control limits (50-150%), the laboratory manager will advise the laboratory director of the out-of-control analytical situation and reanalyze any affected samples.
- (6) Preventative maintenance of analytical instrumentation follows the routine procedures specified in the laboratory's QA/QC program plan for laboratory operations and are documented in the laboratory's equipment logs.

Figures



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UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY, WHITTER QUADRANGLE, 7.5 MINUTE SERIES (TOPOGRAPH), SANTA FÉ SPRINGS, CALIFORNIA (PHOTO REVISED 1981)

Approximate Scale 1" = 24,000

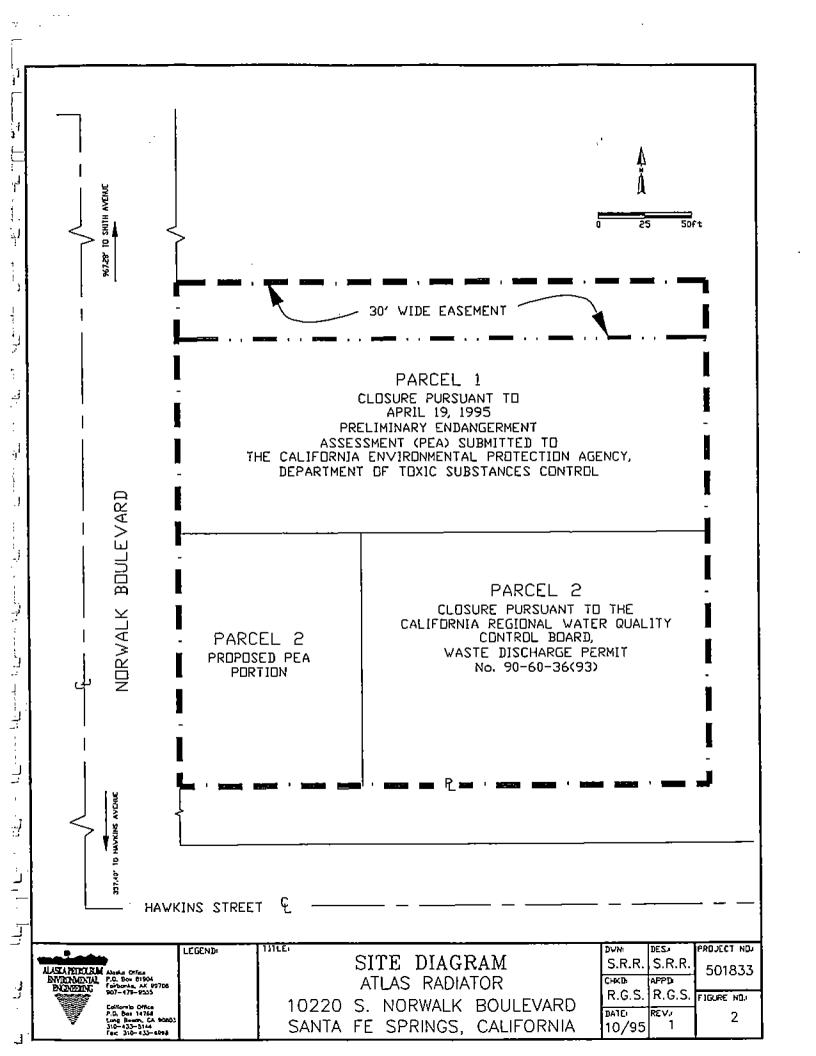
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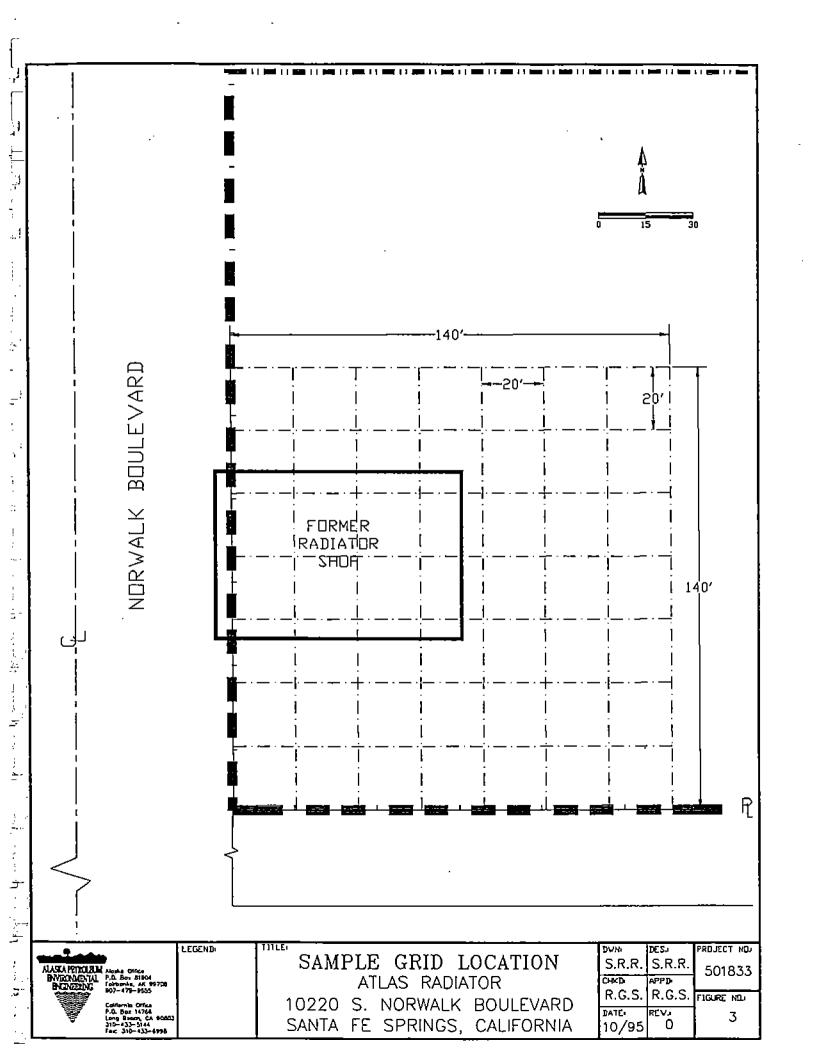
P.O. Boyl4766 I Long Beach, CA 90803 (310)433—5144 ነንሆር:

P.O. Bow 81904 Forconks, AK. 99708 (907)479-9555 SITE LOCATION
ATLAS RADIATOR

10110 S. NORWALK BOULEVARD SANTA FE SPRINGS, CALIFORNIA

	DES.:	PROJECT NO.:	
1	S.R.R.	501833	
	APPD:		
	R.G.S.	FIGURE NO.:	
	DATE: 10/95	1	





Appendix A

TABLE I Background Sample Analysis

Sample Identification	Depth ((t)	Analytical Results ^[1] (ppm) CCR Metals ^[2]
J12-0.5	0.5	Pb @ 81
J12-1.5	1.5	BTL
J12-2.5	2.5	Pb @ 237
M6-1.5	1.5	Pb · ·
М6-2.5	2.5	BTL
M6-3.5	3.5	BTL
J26-0.5	0.5	Pb @ 98
J26-1.5	1.5	BTL
J26-2.5	2.5	BTL
J26-3.5	3.5	BTL

BTL

= below threshold limits

ft

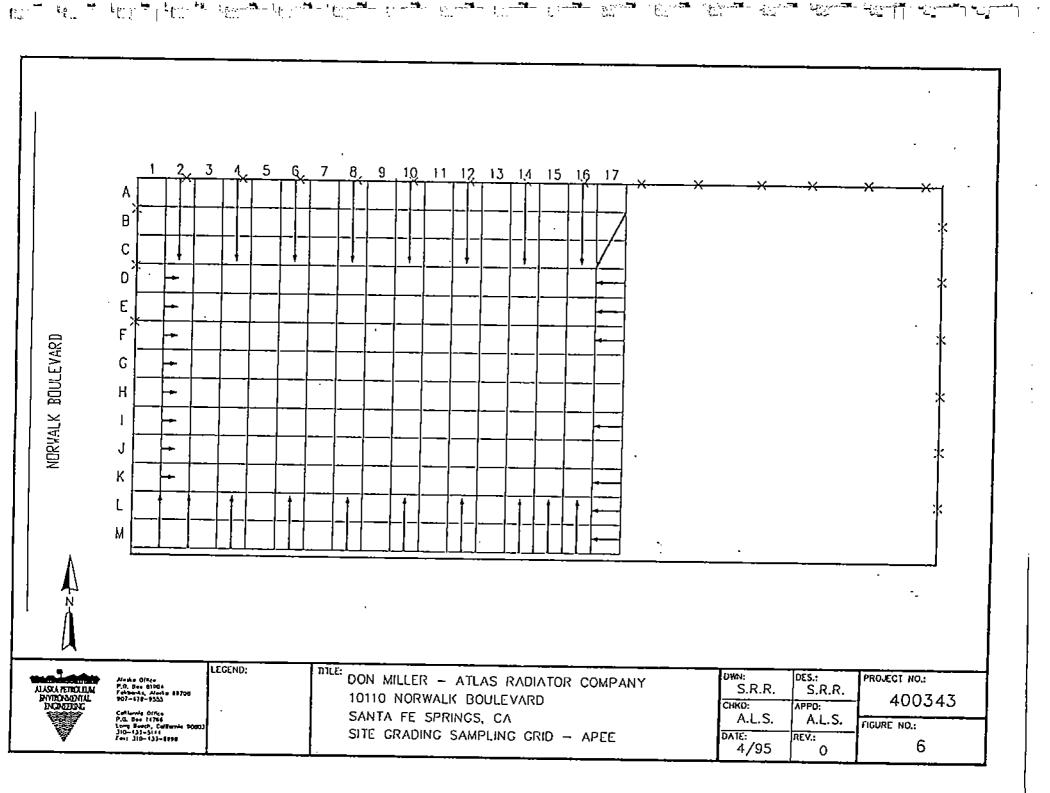
= feet

ppm

= parts per million

^[1] Cu, Pb & Zn = copper, lead and zinc only

California Code of Regulations (CCR), Title 22, Article 11, § 66261.24, Table II - List of Inorganic Persistent and Bioaccumulative Toxic Substances and Their Soluble Threshold Limit Concentration: (STLC) and Total Threshold Limit Concentration (TTLC) Values. Only those results which exceed 10x their respective STLC action limit are reported, otherwise denoted as BTL.



Appendix B

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JOB SITE HEALTH AND SAFETY PLAN

Α.	SITE DESCRIPTION			
	Date October 16, 1995			
	City Santa Fe Springs			
	Hazards Hydrocarbons, heavy metals, backhoe, trip/fall, operating equipment			
	Area affected Oil production operations and radiator repair facility			
	Surrounding population <u>Light industry</u>			
	Topography Flat			
	Weather conditions Hot, dry			
	Additional information			
в.	ENTRY OBJECTIVES - The objective of the initial entry of the contaminated area is			
	to: Delineate the areas to be investigated and collect soil samples therein for chemical			
	analysis			
c.	ON-SITE ORGANIZATION AND COORDINATION - The following personnel are			
	designated to carry out the state job functions on-site. (Note: One person may carry ou			
	more than one job function.)			
	PROJECT TEAM LEADER R. Glenn Stillman			
	SITE SAFETY OFFICER R. Glenn Stillman			
	RECORD KEEPER R. Glenn Stillman			

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FIELD TEAM MEMBERS	R. Glenn Stillman
	Bruce Brey
	Scott Wolf
	Casey Crosby
LOCAL AGENCY REPS	Jess Villamayor - DTSC
CONTRACTOR(s)	APEE
	J & D Operations
	•
All personnel arriving or departing the site	should log in and out with the Record Keeper. All
activities on-site must be cleared through t	he Project Team Leader.
D. ON-SITE CONTROL	
R. Glenn Stillman has been designated to safe perimeter has been established at No	o coordinate access control and security on-site. A tapplicable - ongoing facility operations
No unauthorized person should be within t	his area.
The on-site Command Post and staging a	area have been established at Entrance to facility
•	
The prevailing wind conditions are Weste	τly
Control boundaries are identified by: 1	Norwalk Boulevard and property boundary (fenced

E. HAZARD EVALUATION

The following substance(s) are known or suspected to be on-site. The primary hazards of each are identified.

Substances Involved	Concentrations (If Known)	Primary Hazards
Hydrocarbons Metals	· · · · · · · · · · · · · · · · · · ·	Volatile organics Inhalation, skin contact
Acids		Volatile organics

F. PERSONAL PROTECTIVE EQUIPMENT

Based on evaluation of potential hazards, the following levels of personal protection have been designated for the applicable work areas or tasks:

<u>Location</u>	Job Function		Ī	Level o	f Protect	<u>ion</u>
Exclusion Zone		A A A	В В В	C C C	(D) (D) (D) (D) (D)	OTHER OTHER OTHER OTHER
Contamination Reduction Zone . Specific productive	equipment for each level of	A A A A	B B B B	C C C C	D D D	OTHER OTHER OTHER OTHER
Level A		Level (С	_		
Level B		Level]	D	V	lard hat Vork boo atex glo	

is the appropriate canister	for use with the involved subs	tances and concentrations. A competent type of respiratory protection have been
		F PROTECTION SHALL BE MADE ETY OFFICER AND THE PROJECT
G. ON-SITE WORK	PLANS	-
Work party(s) consisting	of 4 persons will perform the	ne following tasks:
Project Team Leader	R. Glenn Stillman	Supervise sampling
Work Party #1	Bruce Brev Scott Wolf Casey Crosby	Air monitoring if needed Sample procurement Mapping sample locations
Work Party #2		
Work Party #3	A. L. Stillman	Alternate for Project Team Leader

H. COMMUNICATIONS PROCEDURES

Personnel in the Exclusion Zone should remain within sight of the Project Team Leader. Radio contact is the emergency signal to indicate that all personnel should leave the Exclusion Zone.

3

-

The following standard hand signals will be used in case of failure of radio communications:

Hand gripping throat

Out of air, can't breathe

Grip partner's wrist or

both hands around waist

Leave area immediately

Hands on top of head

Need assistance

Thumbs up

OK, I am all right, I understand

Thumbs down

No, negative

I. DECONTAMINATION PROCEDURES

Personnel and equipment leaving the Exclusion Zone shall be thoroughly decontaminated. The standard level N/A decontamination protocol shall be used with the following decontamination stations:

Not applicable

Emergency decontamination will include the following stations: Not applicable

J. SITE SAFETY AND HEALTH PLAN

- 1. R. Glenn Stillman is the designated Site Safety Officer and is directly responsible for safety recommendations on site.
- 2. Emergency Medical Care

Presbyterian Intercommunity, at 12401 E. Washington Blvd., Whittier, CA phone (310) 698-0811 is located 10 minutes from this location.

Local ambulance service is available from <u>AME Ambulance Service</u> at phone (310) 698-0811. Their response time is 10 minutes.

First-aid equipment is available on-site at the following locations.

First-aid Kit	Project Team Leader vehicle	
Emergency Eye Wash	Project Team Leader vehicle	_
Emergency Shower	On-site water hose	
Fire Extinguisher	Project Team Leader vehicle	

Emergency medical information for substance present:

Substance	Exposure Symptoms	First-Aid Instructions
Heavy metals	Skin irritation	Wash off
Acidic soils Hydrocarbons	Allergenic contact Dermatitis	Wash off Wash off
	Inhalation	Avoid airborne
	Eve contact	particulates Eye wash

List of emergency phone numbers:

Agency/Facility	Phone #	<u>Contact</u>
Police	911	
Fire	911	
Hospital	(310)698-0811	

3. Environmental Monitoring

The following environmental monitoring instruments shall be used on-site (cross out if not applicable) at the specified intervals.

Combustible Gas Indicator	- continuous/hourly/daily/other
O ₂ Monitor	- continuous/hourly/daily/other
Colorimetric Tubes	- eontinuous/hourly/daily/other
HNU /OVA / PID	- continuous /hourly/daily/other <u>if needed</u>
Other	- continuous/hourly/daily/other
-	

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4. Emergency Procedures (should be modified as required for incident).

The following standard emergency procedures will be used by on-site personnel. The Site Safety Officer shall be notified of any on-site emergencies and be responsible for ensuring that the appropriate procedures are followed.

Personnel Injury in the Exclusion Zone: Upon notification of an injury in the Exclusion Zone, the designated emergency signal voice/radio contact shall be sounded. The rescue team will enter the Exclusion Zone (if required) to remove the injured person to the hot line. The Site Safety Officer/Project Team Leader should evaluate the nature of the injury, and the affected person should be decontaminated to the extent possible prior to movement to the Support Zone. Contact should be made for an ambulance and with the designated medical facility (if required). No persons shall reenter the Exclusion Zone until the cause of the injury or symptoms is determined.

Personnel Injury in the Support Zone: Upon notification of an injury in the Support Zone, the Project Team Leader/Site Safety Officer will assess the nature of the injury. If the cause of the injury or loss of the injured person does not affect the performance of site personnel, operation may continue, with the on-site EMT initiating the appropriate first aid and necessary follow-up as stated above.

If the injury increases the risk to others, the designated emergency signal voice/radio contact shall be sounded and all personnel shall move to the decontamination line for further instructions. Activities on-site will stop until the added risk is removed or minimized.

<u>Fire/Explosion</u>: Upon notification of a fire or explosion on-site, the designated emergency signal <u>voice/radio contact</u> shall be sounded and all site personnel assembled at the decontaminated line. The fire department shall be alerted and all personnel shall be alerted and all personnel moved to a safe distance from the involved area.

<u>Personal Protective Equipment Failure</u>: If any site worker experiences a failure or alteration of protective equipment that effects the protection factor, that person and his/her buddy shall immediately leave the Exclusion Zone. Reentry shall not be permitted until the equipment has been replaced.

Other Equipment Failure: If any other equipment on-site fails to operate properly, the Project Team Leader and Site Safety Officer shall be notified and then determine the effect of this failure on continuing operations on-site. If the failure affects the safety of personnel or prevents completion of the Work Plan

tasks, all personnel shall leave the Exclusion Zone until the situation is evaluated and appropriate actions taken.

Personal exposure sampling:

The following personal monitoring will be effect on-site:

Medical monitoring: The expected air temperature will be 70°F - 90°F. If it is determined that heat stress monitoring is required (mandatory if over 70°F) the following procedures shall be followed:

Potable water provided and work schedule will be adjusted as needed. Rest periods will be a minimum of every two hours. Heat exhaustion symptoms monitored: muscular weakness, dizziness, nausea, vomiting, pale clammy skin, shallow breathing, weak and fast pulse.

<u>Heat Stroke</u>: Severe headache, skin is dry, red and hot, dizziness, nausea, unconsciousness.

All site personnel have read the above plan and are familiar with its provisions.

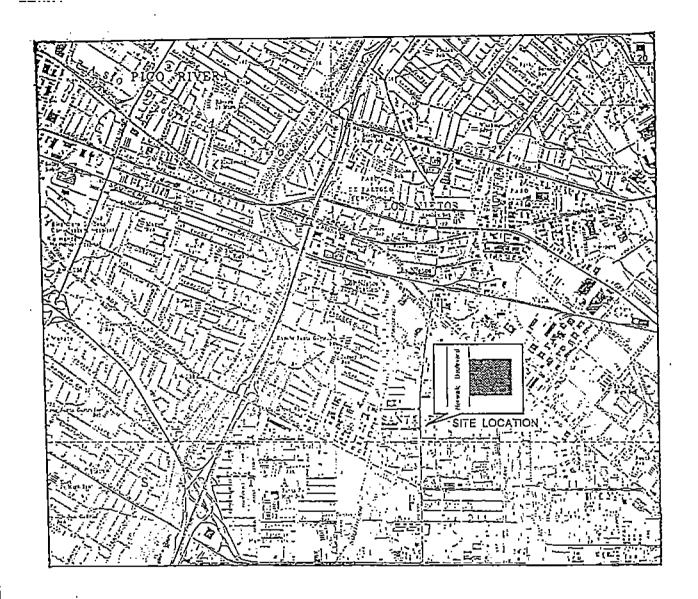
	<u>Name</u>	<u>Signature</u>
Site Safety Officer	see tail gate safety meeting	
Project Team Leader		
Other Site Personnel		
	·	

TAILGATE SAFETY MEETING

Supervisor R. Glenn Stillman	Manager <u>Eddie</u>
Company APEE	Facility Atlas Radiator
Date 09/25/95 Time	Job No501833
ClientMr. Don Miller	Sile Address 10122 Norwalk Blvd.
· <u></u>	Santa Fe Springs, C.
Work Area Location <u>Old radiator repair facilit</u>	y on south side of the property
Type of Work to be Performed (Objectives)Buildin	g decontamination and demolishion
SAFETY TOPICS	
SAPETE TOPICS	S
Protective Clothing/Equipment Rubber boots, full	-face respirator, latex gloves,
coated tyveks	
Potential Chemical Hazards Heavy metals, acids	and volatile organics
Potential Physical Hazardsmoving equipment, ha	and equipment, torch, etc.
Zoteman z mysicar ricardos	oquapana, occupy occu
Emergency Procedures Notify Atlas Radiator p	personnel for assistance. Radio
APEE office	

Hospital/(Clinic Presbyterian Intercommunity	
Address	12401 E. Washington Blvd. Phone 310-698-0811	
Fire Dept	t. or Paramedics Phone911	
Special E	equipment to Bring Rubber Boots: APEE to supply respirator (fit test) and co	
Other	Fire Extinguisher, Eye Wash, Shower, First Aid Kit all on-site at	eks
	the new Atlas Radiator Facility.	

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P.O. Box 14765 Long Beach, CA. 80803 (213) 432-5144 F.O. Box 61904 Fairbanks, AK. 99708 (907) 479-9555

ATLAS RADIATOR

MEDICAL FACILITY MAP

10122 Norwak Boulevard, Santa Fe Springs, California Project No. 94:10018

Scale: 17 = 30901

Date: 12/91

Appendix D

See Instructions on back of page 6

ı	UNIFORM HAZARDOUS	ument No.	2. Page 1	information in the shaded or is not required by Federal to
	3. Generator's Name or Mailing Address ATLAS RADIATOR			9344982
	10110 S. NORWALK BLVD., SANTA FE SPRINGS, CA 90670 4. Generator's Phone 6101 644-6108		H	新的产产的
	5. Transporter 1 Company Name 6. US EPA ID Number FALCON DISPOSAL SERVICE. INC. (1) 9 (8 8 9 6 8 9 8) 7. Transporter 2 Company Name 8. US EPA ID Number 8. US EPA ID Number	A Sections	Proporter LD 1	710-633-44 00 0
			est for	
	P. Designated Facility Name and Site Address CHENTCAL MASTE MANAGEMENT 35251 OLD SKYLINE ROAD	3901 14 Godi	4.7	77.17.17.17.17
	1 11. US DOI Description including Proper Stipping Name, Mazard Class, and ID Number)	Cortainers	13. Total	14. Unit Wash Name
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NER				Ho. BAZOE
T O R				17) 15) 17/9-7
				SPA7Check
]			203	tea Listed About 5. 50
ļ	15. Special Handling Instructions and Additional Information	21/2-2		
	WEAR APPROPRIATE SAFTEY GERR WHEN HANDILING. 24 HOUR EMERGENCY RESPONSE: (310) 944-6108			
	16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accordanced, marked, and labeled, and are in all respects in proper condition for transport by highway accorded in a marked, and large quantity generator, I certify that I have a program in place to reduce the volume and economically procticable and that I have selected the practicable method of treatment, storage, or dispositive to human health and the environment OR, if I am a small quantity generator, I have made a generator.	ding to applicable districtly of war ascal currently as	e international and re generated to the allable to me while	national government regulation a degree I have determined h minimizes the present and it
<u> </u>	waste management method that is available to me and that I can afford. Printed/Typed Name FDDIF CFROA 17. Transporter 1 Acknowledgement of Receipt of Materials	ِ اس <i>ا</i> ر		Month Day
K 4 2 4 8 0	Printed/Typed Name Signature 18. Transporter 2 Admovfedgement of Receipt of Materials	The state of	A Comment	Month Day _
1 1	Printed/Typed Name Signature	- 7		Month Day
F	19. Discrepancy Indication Space			

	The state of the s	n page 6.	epadiment of Tasic Substances Control Socremento, Colifornia
	UNIFORM HAZARDOUS C A D O 2 9 4 10 10 10 18 14		prinction in the shaded areas of required by Federal law.
	ATLAS RADIATOR 10110 B. NORWALK BLVD., SANTA FE SPRINGS, CA 90670 4 Generator's Phone (310) 944-6108	Store Aspell of December No.	<u>184491848</u>
	5. Transporter 1 Company Name 6. US EPA ID Number FALCON DISPOSAL SERVICE, INC. ΓΑρββββββββββββββββββββββββββββββββββββ	G. Joseph Hone	2531/48
	7. Transporter 2 Company Name R. US EPA ID Number 9. Oniopoind Encitiv Name and Site Address CHEMICH, Wiss LE West HIDE OF ENT.	E state (name of 10 Antique of 1 state of 10 G. Seed (of 10) ID 14	
	SETTLEMEN CITY, CH. 93239 C. A T & P & A & 1 1 7	CARGUAG	
<u> </u>	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number) 12. Cor No.	,	///Vol 1 Waste Number 19
G	RU, MAZARDOUS WASTE BOLID, N.O.S., 9,	CMOODIS	Y
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O R			Bypia Tart Tart Tart Tart Tart Tart Tart Tar
		K Hongling Codes for Wasses U	
		15103	
	15. Special Handling Instructions and Additional Information WEAR AFFROPRIATE SAFTEY GEAR WHEN HANDILING. 24 HOUR ENERDENCY RESPONSE: (310) 944-6108	17	
	16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurate packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to	opplicable International and natio	onal government regulations.
	N I can a large quantity generator, I certify that I have a program in place to reduce the volume and task scanarsically practicable and that I have selected the practicable method of treatment, storage, or disposal a threat to human health and the emironment, OR, if I am a small quantity generator, I have made a good to waste management method that is available to me and that I can afford.	surrently excelleble to me which min	nimizes the present and between
1	Printed/Typed Name (NC) S (NC) C (NC) S (N	/	1 1 7 0 95
47.00	18. Transporter 2 Adaptor of Receipt of Materials	Moun	11112005
	Prieted/Jyped Name Signature Signature	-	Morth Day Year
, ć			
TY	20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as a Printed/Typed Name PALM TAND	opted in Hem 19.	Morth / 2 0 9 5
<u>. </u>	DO NOT WRITE BELOW THIS LINE		

· · · · · · · · · · · · · · · · · · ·	
CHE 3650 E. 20	Weighed at M-TECH SYSTEMS, INC. 19939 Sth Street, Los Angeles, CA 90023 (213) 268-5056
	GERTIFIED SCALE TICKET NUMBER 3628
TRANSPORTER IN I CC PUT I GENERATOR AT LOS PACE POINT OF ORIGIN HAZARDOUS NON-HAZARDOUS HAZ MANIFEST NO. TRAILER LIC. NO. SPECIFIC GRAVITY 101541	INBOUND 35120 16 TRUCK ID 92847961 IN DATE 11-14-95 TIME 2:18pm OUT DATE TIME 35120 16 GROSS 29340 16 TARE 5780 16 NET TRUCK ID 92847961
DRIVER'S SIGNATURE	DEPUTY:
weighmaster, whose signature !	WEIGHMASTER CERTIFICATE officialing described commodity was weighed, measured, or counted by a leanth of the cartificate, who is a recognized authority of accuracy, as pre- ncing with Section 12700) of Division 5 of the California Business and by the Division of Measurement Standards of the California Department of

OAIG:E3/REV,5/93 SM

Appendix E

Table I October 18 - 19, 1995 Soil Sampling Analytical Results

Sample Grid	Depth (inches)	Total Lead (ppm)	Comments
Block ^[4]	**************************************		
C2-1	0	1,150	
C2-1	6	250	excavate six inches
C2-2	12	9.1	
C2-3	24	NA	
C4-1	0	55	
C4-1	6	7.6	NFA
C4-2	12	6.4	•
C4-3	24	NA	
D1-1	0	850	
D1-1	6	1,300	excavate 24 inches
D1-2	12	1,100	
D1-3	24	NA	
A6-1	0	5.7	
A6-1	6	5.5	NFA
A6-2	12	290	
A6-3	24	NA	
B1-1	0	720	
B1-1	6	10	NFA
B1-2	12	8.5	
B1-3	24	NA .	
B3-1	0	2,600	
B3-1	6	6,600	excavate 12 inches
B3-2	12	15	
B3-3	24	NA	
B4-1	0	450	excavate 12 inches
B4-1	6	4,260	
E1-1	0	550	
E1-1	6	4,260	excavate 24 inches
E1-2	12	850	
E1-3	24	NA NA	
E2-1	0	55	
E2-1	6	ND	NFA
E2-2	12	3.1	
E4-1	0	4,480	
E4-1	6	210	excavate six inches
E4-2	12	190	
E4-3	24	NA	
D3-1	0	1,130	
D3-1	6	4.5	excavate three inches
D3-2	12	3.3	
D3-3	24	NA	

Table I October 18 - 19, 1995 Soil Sampling Analytical Results

Sample Grid Block ⁽¹⁾	Depth (inches)	Total Lead (ppm)	Comments
D4-1	0	6.8	
D4-1	6	3.9	NFA
D4-2	12	5.2	,
D4-3	24	NA	
D6-1	0	3.2	
D6-1	6	3.8	NFA
D6-2	12	11	
D6-3	24	NA	
F1-1	0	1,480	
F1-1	6	7.3	excavate 24 inches
F1-2	12	9,700	
F1-3	24	NA NA	
F3-1	0	290	
F3-1	6	370	NFA
F3-2	12	44	
F3-3	24	NA	
F6-1	0	150	
F6-1	6	61	NFA
F6-2	12	24	
F6-3	24	NA	
SP-1 ^[1]	0	1,520	soil from around clarifier
SP-1-36	36	300	
SP-2[1]	0	810	soil from underneath steam cleaner area
SP-2-36 _.	36	87	
SP-3 ^[1]	12	1,680	underneath radiator "hot tank"
SP-4 ^[1]	12	2,440	same as SP-2

[1] "XY-1" denotes grid block location and sample number; the first two analyses are of the top and bottom of that brass tube (i.e., at surface and a depth of six inches)

NFA no further action required

NA not analyzed SP soil stockpile

Table II
October 26, 1995
Soil Sampling Analytical Results

Sample: Grid Block	Depth (inches)	Total Lead (ppm) ^[1]	Comments
P-1-A	70	79 (NPS)	NFA; underneath clay sewer pipe from abandoned clarifier
C-3-4	64	13 (NPS)	NFA; adjacent to clarifier influent pipe
T-1	60	11 (NPS)	NFA; underneath clarifier
T-2	60	11 (NPS)	NFA; underneath steel holding tank
B-4-4	12	610 (2,900) ^[2]	NFA
B-3-4	12	2,200 (6,600)[2]	excavate 12 inches
E-1-4	24	6.5 (4,260) ^[2]	NFA
D-1-4	24	5.2 (1,100)[2]	NFA
F-1-4	24	6.6 (9,700)[2]	NFA
D-3-4	28	23 (1,130) ^[2]	NFA
E-4-4	6	4,000 (4,480) ^[2]	excavate 12 additional inches
T-2-1	12	8.2 (NPS)	NFA; underneath steel holding tank inlet pipe
SP-F-1 ^[3]	NM	250 (NPS) ^[2]	NFA
SP-E-1 ^[3]	NM	640 (NPS) ^[3]	NFA
SP-D-1 ^[3]	NM	520 (NPS) ^[2]	NFA
SP-E-2 ^[3]	NM	1,100 (NPS)	resample
SP-P-1 ^[3]	МИ	450 (NPS)	NFA ^[1] ; from underneath abandoned sewer line
F-3-4	0	28 (NPS)	NFA ^[2]

[1] results of the initial sampling analytical results from a grid block are shown in parenthesis

[2] analytical results after the grid block had been excavated to the depth as specified in Table I

[3] soil stockpile

NM not measured; grab sample from stockpile

NFA no further action required

NPS not previously sampled

Table III November 1, 1995 Soil Sampling Analytical Results

Sample Grid Block	Depth (inches)	Total lead (ppm) ^[1]	Comments
B4-6-C	6	190	NFA; disturbed "B" block
B4-18-C	18	180	NFA; same
B4-30-C	30	240	NFA; same
B-48-4C	48	160	NFA; same
B3-10-C	10	54	NFA; same
B3-18-C	18	45	NFA; same
B3-30-C	30	220	NFA; same
B3-48-C	48	110	NFA; same
E4-12-C	12	24 (4,800)	NFA
E4-30-C	30	21 (4,800)	NFA
T-2-C	ММ	150	NFA; sample material around/underneath steel tank as side had been pierced prior to final cleaning
ST-1-C	NM	290	NFA; resample northern side of clarifier after UNOCAL backfilled with material from grid block B3
TS-1-C	NM	5,700	dispose of stockpile; top soil/debris excavated from around hazardous waste storage bin located in grid block B2
NW-1-C	МИ	340	NFA; material excavated and stockpiled from around clarifier after UNOCAL backfilled with material from grid block B3

[1] results of the previous sampling analytical results from a grid block are shown in parenthesis NM not measured; grab sample from stockpile NA not applicable

Table IV November 15, 1995 Soil Sampling Analytical Results

Sample Grid Block	Depth (inches)	Total lead (ppm) ^[1]	Comments
SP-C2 ^[2]	MM	770	stockpile from excavation of grid block C2; use as fill
SP1-2 ^[3]	NM	880 (1,520 to 300)	use as fill
SP3-2 ^[2]	NM	2,100 (1,680)	dispose of stockpile off-site
SP4-2 ^[2]	NM	2,900 (2,440)	same
SPE2-2 ^[2]	NM	1,500 (NPS)	same
C2-4	12	150	NFA

NM not measured; grab sample from stockpile

NFA no further action required

NPS not previously sampled

[1] results of the previous sampling analytical results from a grid block or soil stockpile are shown in parenthesis



Southland Technical Services, Inc.

Environmental Laboratories

7801 Telegraph Road, Suite J Montebello, CA 90640

Phone (213) 888-0728 Fax (213) 888-1509

10-19-1995

Mr. R. Glenn Stillman Alaska Petroleum Environmental Engineering P.O. Box 14766 Long Beach, CA 90803

RECEIVED

OCT 2 0 1995

Project:

501833

Project Site:

10-16-1995

Sample Date: Lab Job No.: AD51033 A.P.E.E.

Dear Mr. Stillman:

Enclosed please find the analytical report for the sample(s) received by STS Environmental Laboratories on 10-17-1995 and analyzed by the following EPA methods:

EPA 7210

EPA 7420

EPA 7950

All analyses have met the QA/QC criteria of this laboratory.

The sample(s) arrived in good conditions (i.e., chilled, intact) and with a chain of custody record attached.

STS Environmental Laboratory is certified by the CA DHS (Certificate Number 1986). Thank you for giving us the opportunity to serve you. Please feel free to call me at (213) 888-0728 if our Laboratory can be of further service to you.

Sincerely,

Roger Wang, Ph.D.

just was

Laboratory Director

Enclosures

This cover letter is an integral part of this analytical report.



Southland Technical Services, Inc.

Environmental Laboratories

7801 Telegraph Road, Suite J Montebello, CA 90640

Phone (213) 888-0728 Fax (213) 888-1509

10-19-1995

Client:

31

Alaska Petroleum Environmental Engineering

Lab Job No.:

AD51033

Project:

501833

Date Sampled:

10-16-1995

10-17-1995

Matrix;

Date Received: Date Analyzed:

10-19-1995

Date Prepared: 10-18-1995

Soil

Element: EPA Method: Copper 7210

Lead 7420

Zinc 7950

Detection Limit:

2.5 mg/kg

2.5 mg/kg

2.5 mg/kg

Results

Sample ID

Lab ID

Copper

<u>Lead</u>

Zinc

A-SP

AD1033-1

3,900

5,900

21,400

		TURNAROUND TIME:					PE					ANA	LYSIS	•				
ALASKA PETROLEUM ENVIRONMENTAL ENCINEERING		P.O. Box 14780 Long Besch, CA 80803 [310] 433-5144 AX [310] 433-0088	P.O. Box 81904 Fairbanks, AK 90708 (907) 479-9555	Ρ/Ω		(Glass, SS, Brass)	Sample Matrix (Soil) Water)	, pg	رن	-2"	·							
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METHOD OF SHIPMENT:			SHIPPED BY: (Signatu	1(4)	COUNER (Signature)				RECEIVE	ED FOR	LAB DY	: [Sign: ت م	العقالة			DATE/		10 e



Southland Technical Services, Inc.

Environmental Laboratories

7801 Telegraph Road, Suite J Montebello, CA 90640

Phone (213) 888-0728 Fax (213) 888-1509 ひという 大田等 明本記書は出ていているというと様ないのないというけっしょう

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10-24-1995

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Mr. R. Glenn Stillman Alaska Petroleum Environmental Engineering P.O. Box 14766 Long Beach, CA 90803

Project:

٠,

501083

Project Site:

Sample Date: 10-18&19-1995 Lab Job No.: AD51037

Dear Mr. Stillman:

Enclosed please find the analytical report for the sample(s) received by STS Environmental Laboratories on 10-20-1995 and analyzed by the following EPA methods:

EPA 7420 (Total Lead)

All analyses have met the QA/QC criteria of this laboratory.

The sample(s) arrived in good conditions (i.e., chilled, intact) and with a chain of custody record attached.

STS Environmental Laboratory is certified by the CA DHS (Certificate Number 1986). Thank you for giving us the opportunity to serve you. Please feel free to call me at (213) 888-0728 if our Laboratory can be of further service to you.

Sincerely,

ġ.j

Roger Wang, Ph.D. Laboratory Director

WR Wat

Enclosures

This cover letter is an integral part of this analytical report.



Southland Technical Services, Inc. Environmental Laboratories

7801 Telegraph Road, Suite J Montebello, CA 90640

Phone (213) 888-0728 Fax (213) 888-1509

10-24-1995

Client:

Alaska Petroleum Environmental Engineering

Lab Job No.:

AD51037

Project:

501083

Date Sampled:

10-18&19-1995

Matrix:

Date Received:

Soil

10-20-1995

Date Prepared: 10-20-1995

Date Analyzed:

10-23-1995

EPA 7420 (Total Lead)

Reporting Units: mg/kg (ppm)

Sample ID	Lab ID	Result	Reporting
			Limit
C2-l(Top)	AD1037-1T	1,150	2,5
C2-1(Bottom)	AD1037-1B	250	2.5
C2-2	AD1037-2	9.1	2.5
C4-l(Top)	AD1037-3T	55	2.5
C4-1(Bottom)	AD1037-3B	7,6	2.5
C4-2	AD1037-4	6.4	2.5
DI-l(Top)	AD1037-5T	850	2.5
D1-1(Bottom)	AD1037-5B	1,300	2.5
D1-2	AD1037-6	1,100	2.5
A6-l(Top)	AD1037-7T	5.7	2.5
A6-1(Bottom)	AD1037-7B	5.5	2.5
A6-2	AD1037-8	290	2.5
B1-I(Top)	AD1037-9T	720	2.5
B1-I(Bottom)	AD1037-9B	10	2.5
B1-2	AD1037-10	8.5	2.5
B3-1(Top)	AD1037-11 T	2,600	2.5
B3-1(Bottom)	AD1037-11B	6,600	2.5
B3-2	AD1037-12	15	2,5
B4-1(Top)	AD1037-13T	450	2.5
B4-1(Bottom)	AD1037-13B	2,900	2.5
E1-1(Top)	AD1037-14T	550	2.5
E1-1(Bottom)	AD1037-14B	4,260	2.5
E1-2	AD1037-15	850	2.5
E2-1(Top)	AD1037-16T	55	2,5
E2-1 (Bottom)	AD1037-16B	ND	2.5
E2-2	AD1037-17	3.1	2.5
E4-1(Top)	AD1037-18T	4,480	2.5
E4-1(Bottom)	AD1037-18B	210	2.5
E4-2	AD1037-19	190	2.5

ND: Not Detected (at the specified limit).



Southland Technical Services, Inc. Environmental Laboratories

7801 Telegraph Road, Suite J Montebello, CA 90640

Phone (213) 888-0728 Fax (213) 888-1509 Spirit Constitution

Additional behavior

10-24-1995

Client:

Alaska Petroleum Environmental Engineering

AD51037

Project:

Lab Job No.: Date Sampled:

10-18&19-1995

Date Received:

Matrix:

Soil · .

10-20-1995

Date Prepared: 10-20-1995

Date Analyzed:

10-23-1995

EPA 7420 (Total Lead)

Reporting Units: mg/kg (ppm)

Sample ID	<u>Lab ID</u>	<u>Result</u>	Reporting Limit
D3-l(Top)	AD1037-20T	1,130	2.5
D3-1(Bottom)	AD1037-20B	4.5	2.5
D3-2	AD1037-21	3.3	2.5
D4-1(Top)	AD1037-22T	6.8	2.5
D4-1(Bottom)	AD1037-22B	3.9	2.5
D4-2	AD1037-23	5.2	2.5
D6-1(Top)	AD1037-24T	3.2	2.5
D6-1(Bottom)	AD1037-24B	3.8	2.5
D6-2	AD1037-25	11	2.5
Fl-l(Top)	AD1037-26T	1,480	2.5
F1-1(Bottom)	AD1037-26B	7.3	2.5
F1-2	AD1037-27	9,700	2.5
F3-1(Top)	AD1037-28T	290	2.5
F3-1(Bottom)	AD1037-28B	370	2.5
F3-2	AD1037-29	44	2.5
F6-1(Top)	AD1037-30T	150	2.5
F6-1(Bottom)	AD1037-30B	61	2.5
F6-2	AD1037-31	24	2.5
SP-1	AD1037-32	1,520	2.5
SP-1-36"	AD1037-33	300	2.5
SP-2	AD1037-34	810	2.5
SP-2-36	AD1037-35	87	2.5
SP-3	AD1037-36	1,680	2.5
SP-4	AD1037-37	2,440	2.5

(4/20/17 /1=34

CHAIN OF CUSTODY

AD51037 TURNAROUND TIME: **ANALYSIS** TYPE (grass) ALASKA PETROLEUM ENVIRONMENTAL ENGINEERING P.O. Box 14760 P.O. Box 81904 Sample Matrix(Soil)Weter) Long Beach, CA Fairbanks, AK 90708 90803 (907) 478-9555 (310) 433-5144 FAX (310) 433-6998 Container (Glass, P/Q PROJECT NAME PROJECT NO. SAMPLER: (Signature) 50/08-3 RADIATOR. SAMPLE ID DATE TIME SPECIAL INSTRUCTIONS TO LABORATORY 1969/91-C2-1 AD 1/03/7-1 1949 AD110317-623 ARCHIVE AD 1-37-3 C4-1 ADI 1637-2 3 CY-Z, AD110317 -ARCHIVE 1100 1110 AD1637十 ACCIVILE 1120 TOTAL NUMBER OF CONTAINERS RELINOVISHED BY: (Signalure) DATE/TIME RECEIVED BY: (Signature) DATE/TIME RECEIVED BY: (Signature) REUNQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature) REUNQUISHED BY: (Signature) DATE/TIME RECEIVED BY: [Signature] RELINQUISHED BY: (Signature) RECEIVED FOR LAB BY; (Signature) COURIER (Signature) DATE/TIME METHOD OF SHIPMENT: SHIPPED BY: (Signature)

page 4 9 6

CHAIN OF CUSTODY ADJ1035 TURNAROUND TIME: **ANALYSIS TYPE** Container (Glass, SS, Brass) P.O. Box 14766 P.O. Box 81904 Sample Matrix (Soil DWater) ALASKA PETROLEUM ENVIRONMENTAL ENGINEERING Long Beach, CA Fairbenks, AK 80803 90708 (310) 433-5144 (907) 479-9555 FAX (310) 433-0998 P/Q PROJECT NO. PROJECT NAME SAMPLER: [Signature] ATTKI RADIATION SPECIAL INSTRUCTIONS TO LABORATORY SAMPLE ID DATE TIME AN 037 - 20 910 03-1 Sol 03-2 AD/637 03-3 ARCHIUS. A01437+22 ADI6371-23 ARCHIVE ADI 637-141 15 73 AU1637 +25 06-3 ARCNIVE TOTAL NUMBER OF CONTAINERS RECEIVED BY: (Signature) DATE/TIME DATE/TIME RECEIVED BY: (Signature) RELINQUISHED BY: [Signature] RELINQUICHED BY: [Signature]7 1136 RECEIVED BY: [Signature] DATE/TIME RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature) RELINGUISHED BY: [Signature] DATE/TIME RECEIVED FOR LAB BY: (Signature) SHIPPED BY: (Signature) COURIER (Signatura) METHOD OF SHIPMENT: 10/2/15/163

page 1 96

CHAIN OF CUSTODY AD51037 **TURNAROUND TIME: TYPE ANALYSIS** SS, Brass) P.O. Box 14786 P.O. Box 81904 Sample Matrix (Soil) Water) Long Beech, CA Feirbanke, AK 90708 90803 (310) 433-5144 (907) 479-9555 Container (Glass, FAX (310) 433-6998 P/Q PROJECT NO. PROJECT NAME SAMPLER: (Signature) 501083 RNOIRTO SPECIAL INSTRUCTIONS TO LABORATORY SAMPLE ID DATE TIME A11437-26 T B 1130 Soil AD/037-2613 [/{0 AD/ 437 -21 450 MRENIUS ADIO 37-28 T 1230 AD10137-128 13 1240 ADID 57-29 1245 ARCNIU 8 AUI 37-30T 13.10 1370 AD/437-31 ARCHIUE 1345 9 TOTAL NUMBER OF CONTAINERS RECEIVED BY: (Signature) RELINQUISHED BY: [Signature] DATE/TIME RELINQUISHED BY: ISignolure) DATE/TIME RECEIVED BY: (Signature) DATE/TIME RECEIVED BY: (Signature) DATE/TIME RECEIVED BY: [Signatura] RELINQUISHED BY: (Signature) RELINGUISHED BY: (Signature) DATE/TIME RECEIVED FOR LAB BY: (Signature) COURTER (Signature) METHOD OF SHIPMENT: SHIPPED BY: (Signature) 10/20/65 /15/6

page 69 6 AD51037

CHAIN OF CUSTODY

TURNAROUND TIME: **ANALYSIS** TYPE Brass) P.O. Box 14700 P.O. Box 81804 Sample Matrix (Soilly Water) Fairbenke, AX Long Beach, CA 80803 80708 (907) 479-9555 (310) 433-5144 FAX (310) 433-6998 P/Q Containly (Glass) PROJECT NO. PROJECT NAME SAMPLER: (Signature) 50108-3 ATIAS RAPPIATON SPECIAL INSTRUCTIONS TO LABORATORY SAMPLE ID DATE TIME AD1437-32 soll 35 10:32 TOTAL NUMBER OF CONTAINERS DATE/TIME 14/2/195- 1/36 DATE/TIME RECEIVED BY: (Signature) RELINGUISHED BY: |Signature| RECEIVED BY: (Signature) RELINGUISHED BY: [Signature] DATE/TIME RECEIVED BY: [Signature] RELINGUISHED BY: (Signature) RELINGUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature) 10/20/15 1/234 COURIER (Signatura) METHOD OF SHIPMENT: SHIPPED BY: (Signature)



Southland Technical Services, Inc.

Environmental Laboratories

7801 Telegraph Road, Suite J Montebello, CA 90640

Phone (213) 888-0728 Fax (213) 888-1509

10-30-1995

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Mr. R. Glenn Stillman Alaska Petroleum Environmental Engineering P.O. Box 14766 Long Beach, CA 90803

RECEIVED
NOV 0 1 1995

Project:

501833/Atlas Radiator

A. B. E. E.

Project Site:

Sample Date: 10-26-1995 Lab Job No.: AD51051

Dear Mr. Stillman:

Enclosed please find the analytical report for the sample(s) received by STS Environmental Laboratories on 10-26-1995 and analyzed by the following EPA methods:

EPA 7210 (Copper) EPA 7420 (Lead) EPA 7950 (Zinc)

All analyses have met the QA/QC criteria of this laboratory.

The sample(s) arrived in good conditions (i.e., chilled, intact) and with a chain of custody record attached.

STS Environmental Laboratory is certified by the CA DHS (Certificate Number 1986). Thank you for giving us the opportunity to serve you. Please feel free to call me at (213) 888-0728 if our Laboratory can be of further service to you.

Sincerely,

Roger Wang, Ph.D.

Laboratory Director

Enclosures

This cover letter is an integral part of this analytical report.



Southland Technical Services, Inc.

Environmental Laboratories

7801 Telegraph Road, Suite J Montebello, CA 90640

Phone (213) 888-0728 Fax (213) 888-1509

10-30-1995

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Client:

Alaska Petroleum Environmental Engineering

Project:

501833/Atlas Radiaotor

Matrix:

Soil

Date Prepared: 10-27-1995

Detection Limit:

2.5 mg/kg

Lead

Lab Job No.:

Date Sampled:

Date Received:

Date Analyzed:

AD51051

10-26-1995 10-26-1995

10-28-1995

Element: EPA Method: Copper 7210

7420 2.5 mg/kg Zinc 7950

2.5 mg/kg

Results

Sample ID	<u>Lab ID</u>	Copper	<u>Lead</u>	<u>Zinc</u>
P-1-A	AD1051-1	42	79	1,100
C-3-4	AD1051-2	27	13	59
T-1	AD1051-3	21 .	11	74
T-2	AD1051-4	20	11	85
B-4-4	AD1051-5	95	610	1,100
B-3-4	AD1051-6	520	2,200	6,700
E-1-4	AD1051-7	10	6.5	37
D-1-4	AD1051-8	12	5.2	38
F-1-4	AD1051-9	8.5	6.6	36
D-3-4	AD1051-10	24	23	270
E-4-4	AD1051-11	860	4,000	3,000
T-2-1	AD1051-12	13	8.2	110
SP-F-1	AD1051-13	150	250	220
SP-E-1	AD1051-14	170	640	640
SP-D-1	AD1051-15	150	520	540
SP-E-2	AD1051-16	220	1,100	69 0
SP-P-1	AD1051-17	60	450	940
F-3-4	AD1051-18	11	28	64

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TOTAL P.01

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Southland Technical Services, Inc.

Environmental Laboratories

7801 Telegraph Road, Suite J Montebello, CA 90640 Phone (213) 888-0728 Fax (213) 888-1509 RECEIVED

NOV 1 3 1995

A. P. E. E.

11-03-1995

Mr. R. Glenn Stillman

Alaska Petroleum Environmental Engineering

P.O. Box 14766

Long Beach, CA 90803

Project:

501833/Atlas Radiator

Project Site:

Sample Date:

11-01-1995

Lab Job No.:

AD51107

Dear Mr. Stillman:

Enclosed please find the analytical report for the sample(s) received by STS Environmental Laboratories on 11-02-1995 and analyzed by the following EPA methods:

EPA 7210

EPA 7420

EPA 7950

All analyses have met the QA/QC criteria of this laboratory.

The sample(s) arrived in good conditions (i.e., chilled, intact) and with a chain of custody record attached.

STS Environmental Laboratory is certified by the CA DHS (Certificate Number 1986). Thank you for giving us the opportunity to serve you. Please feel free to call me at (213) 888-0728 if our Laboratory can be of further service to you.

Sincerely,

Roger Wang, Ph.D.

pred was

Laboratory Director

Enclosures

This cover letter is an integral part of this analytical report.



Southland Technical Services, Inc.

Environmental Laboratories

7801 Telegraph Road, Suite J Montebello, CA 90640

Phone (213) 888-0728 Fax (213) 888-1509 file of definitions for the contract of

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11-03-1995

Client:

Alaska Petroleum Environmental Engineering

Lab Job No.: Date Sampled: AD51107 11-01-1995

Project:

501833/Atlas Radiator

Date Received:

11-02-1995

Matrix;

Soil

Date Prepared: 11-02-1995

Date Analyzed:

11-03-1995

Element:

Lead

Zinc

EPA Method:

Copper 7210

7420

7950

Detection Limit:

2.5 mg/kg

2.5 mg/kg

2.5 mg/kg

Results

Sample ID	<u>Lab ID</u>	Copper	<u>Lead</u>	Zinc
B4-6-C	AD1107-1	37	190	560
B4-18-C	AD1107-2	42	180	580
B4-30-C	AD1107-3	40	240	1,100
B4-48-C	AD1107-4	54	160	570
B3-10-C	AD1107-5	21	54	330
B3-18-C	AD1107-6	20	45	130
B3-30-C	AD1107-7	26	220	320
B3-48-C	AD1107-8	28	110	300
E4-12-C	AD1107-9	22	24	56
E4-30-C	AD1107-10	29	21	48
T-2-C	AD1107-11	60	150	180
ST-1-C	AD1107-12	50	290	280
TS-1-C	ADI107-13	1,300	5,700	4,200
NW-1-C	AD1107-14	68	340	310

Lab Job No.: AD51149 CHAIN OF CUSTODY **TURNAROUND TIME:** ANALYSIS Containe (Glass, SS, Brass) P.O. Box 14786 P.O. Box 81904 Sample Malax (Soil / Water) Fairbanks, AK Long Beach, CA ENVIRONMENTAL ENGINEERING 90803 90708 (907) 479-9565 (310) 433-5144 FAX (310) 433-8998 P/Q SAMPLER: [Signature] PROJECT NAME SPECIAL INSTRUCTIONS TO LABORATORY SAMPLE ID DATE TIME AD1148-TOTAL NUMBER OF CONTAINERS RECEIVED BY: (Signature) RECEIVED BY: (Signature) RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature) DATE/TIME RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature) RELINQUISHED BY: (Signature)

COURTER (Signature)

SHIPPEO BY: (Signature)

DATE/TIME

11/15/85 12:10

RECEIVED FOR LAB BY: (Signature)

METHOD OF SHIPMENT:

Appendix F

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CALL INE

OF AN CMPROSE OF THE CONTRACT OF THE CONTRACT

See Instructions on Back of Page 6 and Front of Page 7

Department of Health Services Toxic Substances Control Division

print or type. Form designed for use on elite (12-pitch type	-	20,4110					Sacramento, California
UNIFORM HAZARDOUS 1. General VASTE MANIFEST CIAID	01'= US EPA ID NO. 01249141 0141 9	R. L. Pocu	anifeat iment No.		_		shaded areas Federal law.
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o. Hampbilet Company Name	6. US ΕΡΑ .(.Δ.Τ).(2 . Κ.	NO Number	. n . Ve. r		te Transporter's ID naporter's Phone	- 40	<u> </u>
7. Transporter 2 Company Name	8. US EPA	O DO Number	101 116		di c'renegener's ID	X 02	23 2 2635
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Chem TECH SySTEMS 3600 E. 26th	/ a V			H. Fac	Slity e Phone	. 7 .	
Los Angeles (A 900)3	<u> </u>	<u>9933</u>		-	(2.3) 2	· -	010
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EMERGENCY CONTACT							
(310) 433-5144 x 20) 6	Menn Stillman	~					
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II I am a large quantily generator, I centily that I have to be economically practicable and that I have select present and thure lavest to human health and the egeneration and select the best waste management to	sted the practicable method evironment; OR, if I am a se	i of treatment, mell quantity go	alorage, or enerator, I h	disposa	currently available	to me wh	ich minimizes the
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DO NOT WRITE BELOW THIS LINE.

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AHG.::	15. Special Handling Instructions and Additional Information EMCREGICY CONTACT GLENN STILLMAN (310) 433-5			
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State of California—Health and Wettare Agency Form Approved OMB No. 2050—0039 (Expires 9-30-91) See Instructions on Back of Page 6 Department of Hoalth Services Toxic Substances Control Division and Front of Page 7 Secremento, California Please print or type. Form designed for use on elite (12-pitch typewriter). 1. Generator's US EPA ID No. Manifest UNIFORM HAZARDOUS 2. Page 1 Information in the shaded areas ADIGNAPHONIA & BUY WASTE MANIFEST is not required by Federal law. 3. Generator's Name and Mailing Address A. State Manifest Document Number 4時間 3月 Atlas Rudiator Sunta Fe Springs, CA 90670 B. State Generatore ID 10110 S. Norwalk Blud. 4. Generator's Phone (310) 944 - 61 4 1A1HIQ 316-101 (17 Transporter 1 Company Name C. State Transporter's ID 918101818131 Torres Co D. Transporter's Phone 7. Trensporter 2 Company Name E. State Transporter's ID F. Transporter's Phone 9. Designated Facility Name and Site Address US EPA ID Number G. State Facility's ID Chichi Tach Systems 3650 E 26th H. Facility's Phone 14NTI 981 9933148 DS ANGELES (LÍ3) 12. Containers 13. Total 14. Unit 11. US DOT Description (Including Proper Shipping Name, Hazard Clase, and ID Number) Waste No." Quantity No. Туре State RQ HAZARdous WASte SOLID, N.O.S. (DOOR) - ا ا ص BOL 00018 GENERAT b. State EPA/Other Ç, State EPA/Other 뜌 а. State Š EPA/Other RESPONSE J. Additional Descriptions for Materials Listed Above K. Handling Codes for Wastes Listed Above A. Soil Contaminated with lead Profile # 251222-04 d. LONAL <u>Erl</u>g # 31 15. Special Handling Instructions and Additional Information EMEAGENCY LONTACT 뛷 Glenn Stillman CALL 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and SPICE, national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good talk effort to minimize my waste 뚱 **EMERGENCY** generation and select the best waste management method that is available to me and that I can afford. içinted/∫ypęd Name funt (for thee me Transporter 1 Acknowledgement of Receipt of Materials ξ Printed/Typed Name Signature Month Day Year ò 18. Transportor 2 Acknowledgement of Receipt of Materials 男がら Printed/Typed Name Sloneture Month Day Year ₹ 19. Discrepancy Indication Space

DHS 8022 A

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Do Not Write Below This Line

Signature

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

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DHS 8022 A

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	15. Special Handling Instructions and Additional Information EMENCY CONTACT (310) 433-5144 × 207 (June Stullman) 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are and are classified, packed, marked, and labeled, and are in all respects in proper condition to	e fully and a or transport	ccuratel by high	, y described abo vay according (ove by prop	per ahipping name le international ar			
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See Instructions on Back of Page 6 and Front of Page 7

Department of Health Services
Toxic Substances Control Division
Secrements California

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Appendix G

LEAD RISK ASSESSMENT SPREADSHEET CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

INPUT			Ουπυτ						
MEDIUM	LEVEL		-	per	centile	 S	 -	PRG-99	PRG-95
LEAD IN AIR (ug/m ^ 3)	0.15		50th	90th	95th	98th	99th	(uq/q)	(ug/g)
LEAD IN SOIL (ug/g)	167.0	BLOOD Pb, ADULT (ug/dl)	2.4	3.8	4,3	4.9	5.4	863.4	1281.0
LEAD IN WATER (ug/l)	15	BLOOD Pb, CHILD (ug/di)	4.8	7.5	8.5	9,8	10.8	129.9	260.5
PLANTUPTAKE? 1=YES 0=NO	1	8LOOD Pb, PICA CHILD (ug/dl)	13.4	21.0	23.8	27.5	30.3	19.7	39.6
RESPIRABLE DUST (ug/m ^ 3)	50	BLOOD Pb, INDUSTRIAL (ug/di)	2.0	3.1	3.5	4.1	4.5	4262.5	6306.5

EXPOSURE PA	RAMETERS
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		residential			industrial
	units	adults	children	children	adults
General				with pica	
Days per week	days/wk	7	7	7	5
Dermal Contact					
Skin area	cm^2	3700	2800	2800	5800
Soil adherence	mg/cm ^ 2	0.5	0.5	0.5	0.5
Route-specific constant	(ug/dl)/(ug/day)	0.00011	0.00011	0.00011	0.00011
Soil ingestion					
Soil ingestion	mg/day	25	55	790	25
Route-specific constant	(ug/dl)/(ug/day)	0.0176	0.0704	0.0704	0.0176
Inhalation					
Breathing rate	m ^3/day	20	10	10	20
Route-specific constant	(ug/dl)/(ug/day)	0.082	0,192	0.192	0.082
Water ingestion		·			
Water ingestion	l/day	1.4	0.4	0.4	1.4
Route-specific constant	(ug/dl)/(ug/day)	0.04	0.16	0.16	0.04
Food ingestion					
Food ingestion	kg/day	2.2	1.3	1.3	2.2
. Route-specific constant	(ug/dl)/(ug/day)	0.04	0.16	0.16	0.04
Dietary concentration	ug/kg	13.6	13.6	13.6	10.0
Lead in produce	ug/kg	75.2	75.2	75.2	

PATHWAYS, ADULTS

	THE THE TOTAL POLICE						
		Residential		Industrial			
		Blood Pb	percent	Blood Pb	percent	Concentration	i
	Pathway	ug/dl	of total	ug/dl	of total	in medium	l
ĺ	SOIL CONTACT;	0.03	1%	0.04	2%	167 ug/g	i
	SOIL INGESTION:	0.07	3%	0,05	3%	167 ug/g	i
	INHALATION:	0.26	11%	0.19	9%	0.16 ug/m ^ 3	
	WATER INGESTION:	0.84	35%	0.84	42%	15 ug/l	
	FOOD INGESTION:	1.20	50% :	0.88	44%	13.6 ug Pb/kg diet	

PATHWAYS, CHILDREN

	Typical		with pica		
	Blood Pb	percent	Blood Pb	percent	concentration
Pathway	ug/dl	of total	ug/dl	of total	in medium
SOIL CONTACT:	0.02	1%	0.02	0%	167 ug/g
SOIL INGESTION:	0.65	14%	9.29	69%	167 ug/g
INHALATION:	0.30	6%	0.30	2%	0.16 ug/m ^ 3
WATER INGESTION:	0.96	20%	0.96	7%	15 ug/l
FOOD INGESTION:	2.83	59%	2.83	21%	13.6 ug Pb/kg diet

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